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The Journal of The Association of American Geographers

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SHANNON MCCUNE, Editor

New Series, Volume 10 1958

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EVELYN L. PRUITT, Editor

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A DESIGN FOR RESEARCH IN THE GEOGRAPHY OF AGRICULTURE*

John C. Weaver
University of Nebraska

Surely these comments should be prefaced by a firm disavowal of any pretense to uncommon insight, concerning either geography in general or agricultural geography in particular. No claim is made for observations that are new or profound. Nor is the object to report upon any specific line of completed investigation. Essentially this is a simple statement of basic convictions which derive from some twenty years of personal research effort in the geography of agriculture.

Further, it may be appropriate to observe that the opinions given expression here reflect a type of agricultural geographic philosophy more in the tradition of Engelbrecht and Finch, than in that of such distinctly anthropocentric scholars as Hahn and Waibel. The paramount concern is that of precise and objective measurement and pattern definition among the individual features and combinations of features of agricultural production, as physical entities and economically active phenomena, rather than the definition of the cultural landscapes which they may comprise or of which they may be a part.

In agricultural geography, although not uniquely in this branch of the field, most workers would probably be willing to accept two goals of successive attainment as representing primary orders of business: first, the establishment of the essential character of selected phenomena or combinations of phenomena, and the description of their measured distributional and behavior patterns in space and time; second, the explanatory interpretation of the existence and nature of the patterns which have been disclosed. Obviously the basic validity and usefulness of any interpretation must of necessity be entirely dependent upon the objective accuracy of the initial description.

The assertion is often made that gaining the first of these goals, namely establishing the patterns of distribution, no matter how effectively it may be accomplished, is without value in the absence of explanation; that descriptive measurement without interpretation is sterile, incomplete, and indefensible by itself as a scientific product. The repetition of this point of view has been persistant and persuasive and generally has gone unquestioned. As unsound half truths, such statements do call for challenge, however. Even with reference to broad, theoretically conceived vistas of ultimate achievement, to be given expression among students, and professional colleagues in other disciplines, they demand careful scrutiny and qualification. But very particularly to the extent that they may be accepted as a professional credo, under the banner of which geographers actually plan the overall advance of their research, they can, if taken literally, have a dangerously pernicious effect in beclouding the critical issue of the timing by which we must logically proceed. Ought not the vital question be raised: have we not been guilty of failing to attain adequate foundation levels of descriptive perception, before, in too great haste, seeking interpretive understanding?

* This paper, presented at the University of Michigan in April 1957, is a revision of a paper read at the AAG Anniversary Meeting, Philadelphia, April 1954.

As is true of much of geography at large, agricultural geography is a young endeavor, and the desire for the early attainment of recognized academic responsibility is understandably urgent. But in our overanxiety to gain quick results, we must be on guard lest our output be by quality inadequate or by size insignificant.

In reviewing the accumulated results of American research in agricultural geography, a person is impressed by the volume of effort that can be recognized as belonging to either of two major categories. One has been the small scale generalization, both descriptive and interpretative, of extensively conceived agricultural regions. Their definition being particularly associated with the early and middle decades of the first half of the 20th Century, these broad regions were defined in necessarily hurried response to the needs of an infant field which had limited numbers of professional man hours to expend, but which was grappling hopefully with a growing opportunity to teach college courses in human and economic geography. An inadequate supply of bones had to be quickly systematized into complete skeletons, and these efforts in design gave us such early constructs of pedagogic utility as Corn Belt, Cotton Belt, and Dairy Belt.

A second major species of agricultural geographic research, and one which encompasses a sizeable proportion of the productive output of the most recent decades, is the intensive study of decidedly restricted coverage. Typically these efforts have dealt at large scale either with limited subjects, in which single or, at best, small groups of closely related phenomena have been lifted from the total agricultural complex for specific descriptive and interpretive examination, or with small areas, in which it has seemed feasible to treat the wider totality of the agricultural scene. Indeed, a currently increasing number of instances could be cited in which both the topic and the area under consideration have been extremely narrow in scope. Would it not have to be conceded that such studies have generally been able to achieve little more than isolated and unrelated fragments of broad understanding?

In a sincere desire to avoid being in any sense hypercritical, one must approach any appraisal of these endeavors with an appreciation of the problems inherent in agricultural geographic research from the beginning. The company of individuals who would call themselves agricultural geographers has always been small, and, at least relatively, is probably smaller now than two decades ago. The total budget of potential research hours has never been large, and what little there has been has had to be spread almost pitifully thin over a tremendous range of investigative challenge. Not only have professionally trained workers been few, but their research has seldom attracted substantial financial support. Most of what has been accomplished has been done at individual expense and in unassisted solitude. In short, the situation has been such as almost of necessity to induce superficiality with respect to large topics and areas, and depth without adequate correlative frames of reference with respect to small topics and areas.

In sympathetic recognition of the virtually insurmountable difficulties which have handicapped the advances that have been made, in what manner shall we assess our present position? Must we not admit that our established major agricultural regions or belts are far-flung generalizations, sketched with broad strokes, and defined by subjectively selected criteria? As teaching devices these generalizations have been useful, if not entirely defensible. Clearly they are not solid, objectively derived, precision creations at a professionally satisfying scientific level. At best they are to be viewed as temporary expedients for the classroom, and not as desirable foundations for future research.

As I observed in connection with my initial crop-combination regions studies for the United States middle-west:

"Over-generalized agricultural regions have been labeled with over-simplified, single-crop names, such as 'Corn Belt,' 'Winter Wheat Belt,' or 'Spring Wheat Belt.' Little realistic appraisal has been made, for example, of the fact that within the so-called 'Corn Belt' corn is not a uniformly pre-eminent crop element in a universally similar crop association. Indeed, from Nebraska to Ohio corn holds many different positions in many different crop combinations. In some localities corn appears in association with only one additional major crop; elsewhere it shares available cultivated space with from two to six. Even in different areas where corn has the same number of significant companion crops, their identity is not always the same. As a matter of fact, in some parts of the Corn Belt the land-use position of corn in relation to other crops is more nearly like that in certain distinctly non-Corn-Belt districts, than like that in other parts of the Corn Belt itself."

Significant, too, is the fact that such corn as is grown throughout this broad heartland of the middle-west holds a highly variable place in the basic farm economy from one district to another. As my recently published livestock combination regions have revealed, the relative significance of animal feeding is anything but consistant, or even similar, across the so-called Corn Belt, and where areas can be isolated in which the absolute importance of corn for local feeding is somewhat comparable, the livestock associations involved, and the animal emphases within them, may be entirely different.

Equally questionable are the widely accepted regional generalizations known as the Winter and Spring Wheat Belts on the Great Plains' margins of the middle-west. These are all too commonly descriptively pontificated to geography students in comparable terms as being extensive, one-crop agricultural zones. Even the most rudimentary statistical analysis, however, reveals these "Belts" to be totally different when the real ties of cropland-use patterns are considered. The heart of the winter-wheat region, in central and western Kansas, may justifiably be called monocultural. The spring-wheat area, to the north, is by complete contrast, dominated by multiple associations of 5 to 6 crops, in which wheat is but a single element. Whereas, wheat may occupy over 90% of the total harvested cropland in central Kansas, this grain is likely to claim well under 50% of the cultivated land in central North Dakota.

The fact is, that when one comes to grips with the matter at close range, he cannot help but question whether the loosely defined and broadly generalized use of such so-called regional identities as Corn Belt, Winter Wheat Belt, or Spring Wheat Belt, does not actually represent completely misleading and basic pedagogic irresponsibility. And, however, these belts may be appraised as vehicles for the systematizing of information for the classroom, surely they do not reflect professional credit on geography as either products of, or foundations for, research.

Indeed, could we logically have anticipated that initially generalized regions would be found satisfactory as the increasing insights of time permitted more elaborate measurement and testing? Within the very nature of things the definition of valid agricultural regions is not the effective starting point. The region is by concept the distant, evolving goal of final synthesis, attained only at the level of completed effort and coordinated, yet detailed, perception. Though pedagogic expediency may have called regions into early being, certainly we cannot with well-founded hope for success utilize them as base lines from which to commence our advance to ultimate understanding through continuing research.

It is not surprising that, in more recent times, agricultural geographers have begun to work with smaller topics and smaller areas. With limited resources of both time and money, individuals have been compelled to delimit their immediate objectives sharply if depth was to be gained, and depth was clearly called

for if foundations were to be soundly laid. The principal problem has been that the fragments of deepened knowledge that we have been thus acquiring have existed largely in a vacuum. It has seemed substantially impossible to combine the multiplicity of comparatively small and variably defined pieces into meaningful totals.

Have we not, perhaps, reached a point where a thorough self-examination and a regrouping of our forces has become imperative? We have fought a succession of scattered flanking and diversionary actions, many of them with real effectiveness, but progress on the central front has been slow. Battle plans of breadth and vision should be formulated; patient, but steady, pressure must be applied all along the line.

Let us begin with a firm denial of the assertion that to do creditable work, we must give simultaneous concern to both description and interpretation. Let us resolve to bring solid accomplishment to one job, before impatiently jumping ahead to another. Accurate, rigorously established taxonomic identification, and precise, measured observation and description of distribution and distributional change, should on their own merit bring professional acclaim. In fact, enlightened, broad-gauged concern for this type of endeavor is our greatest present need, if our over-all effort in agricultural geography is finally to succeed. Identification and description may not be our ultimate aim, but they do constitute the first order of geographic business.

To say to the geographer that a virtually exclusive initial preoccupation with such problems, no matter how prolonged his search for their solution, is inadequate in purpose, would be comparable to charging the classical chemist with setting his sights too low while for generations he sought to isolate, identify, and describe his elements, radicals, and compounds and their patterns of behavior. In truth it is only in the last two or three decades that the chemist, with centuries of weighing, measuring, and descriptive analysis behind him, has successfully approached the interpretive realm of why. Without apology for valid identification and description, the chemist laid his fundamental groundwork first. Having established firm foundations upon which to stand he then could reach out with confidence for higher levels of attainment. In our professional youth, should we not build greater strength into our foundations through the more adequate identification of our elements and compounds, and the more accurate description of their distributional behavior?

In approaching this primary commitment, we must develop a new attitude and a new array of effective techniques leading toward sound indices of inventory and descriptive principles; indices and principles fit to function in broad realms of applicability, and to yield strictly comparable results. Among other things this is a plea for a better statistical methodology; not a borrowed methodology, developed in another field for essentially non-geographic purposes, but a new statistical approach, of basic theoretical design geared to match and solve our own unique problems. We must create techniques that will provide us not only with new fundamental insights, but also with procedures susceptible both of precise repetition and specific interpretation.

We have compelling reasons to reject the oft-repeated dictum that ours is a field of knowledge which cannot be subjected to rigorous identification and measurements. For too long this rationalized easy way out has been accepted as justifying hazy subjectivity and reconnaissance guess work. At subsequent levels of interpretation, prediction, and control, the human element unquestionably presents problems that can not be statistically measured. In no way, however, does this condition effect either our ability or our obligation to found our science on solid accurate description.

Should we not accept the premise of the chemist that the material substance with which we deal, is by nature reducible to component elements, and even isotopic variants of those elements? These factors need to be isolated and carefully measured, that they may be known, and known for what they are. On a broad foundation of such character the work of many can be built, and amalgamated into, an ultimately cohesive and satisfying goal. We must be systematically creative in accumulating totals of broadly applicable fundamentals to which other professional colleagues can add with confidence. Really substantial progress never can be gained by individual workers pressing unrelated advances, always from the starting line.

Pursuing our analogy with the chemist, what can we say are the elements with which the agricultural geographer is trying to deal? What are our material bits of substance which cannot be separated into substances different from themselves, by ordinary means? So little careful consideration has been given to this vital matter that it is to be expected that any group of geographers could quickly dissolve into heated argument over attempted identification. It is not the claim, or even the purpose, of these remarks to offer a specific answer to this riddle. The solution can be achieved only by extended and painstaking experimentation and analysis, and not through the efforts of one man, but through the combined efforts of many. It took many chemists many generations to identify the elements of physical matter. It is only with a desire to clarify the concept as it may be applicable to geography that, with inordinate temerity, certain possibilities are suggested.

To commence with the most obvious, one would probably expect to find at least some of his definable elements among individual crops and livestock types. Among crops, for example, we might perhaps find it defensible for practical purposes to isolate as separate agricultural geographic elements such items as silage corn, grain corn, malting barley, feed barley, fiber flax, seed flax, soybeans grown for hay, or soybeans grown for beans. In the case of livestock the basic entity might be beef cattle, wool sheep, or other specific units recognizable on bases of both physical and functional distinctiveness.

To be sure, these are far from being the most minutely restricted divisions of the substance of agricultural geography that we could conceive or deal with. Classifiable under the heading of seed flax, for example, there are many varieties of the plant, each with its own environmental relationships and productive capacities. Among dairy cattle, of course, there are many breeds differing one from the other under a variety of bases of measurement and functional significance. Perhaps these levels of refinement could be demonstrated to be closer to the true nature of elements. They could also be judged to be no more than measurable variants of essential entities, and therefore isotopes rather than elements. In any event, at whatever level of distinction the definition of element may be evolved, these are features of substance that can be specifically identified and measured.

At this point of element measurement we must concede that the analogy between our problems and those of the chemist should not be pushed too far. The chemist has the advantage of being able to measure such features of his elements as weight and reaction in single planes of reference. Cobalt is cobalt in Wyoming or Pennsylvania; cobalt is cobalt in 1957 or 1857. At the present state of our knowledge of our elements, we cannot be sure this is true. We must make our measurement in the double dimensions of space and time. Clearly crop or livestock elements, whatever they may be, will vary in their land occupancy strength, their production volume and quality, their value, and their place in the total economy, depending upon the nature of their geographical situation. And further, such measured determinants as can be established in space, are not stable with reference

to time. It is to be freely admitted that a host of baffling problems are introduced by these variable factors of space and time dimensions, but both are measurable, and, in that knowledge, we should view them as complications to be overcome and not as omens of certain defeat.

Surely the elements of agricultural geography are not be be found alone among individual crops and types of livestock, with their inherent characteristics which derive from space and time. There are certainly other features of the agricultural complex, measurable within our twin dimensions, that are also elemental in nature. Such recognizable, but inadequately analyzed, features as intensity of production activity, mechanization, and labor requirements may be cited as examples.

One practical conclusion is abundantly clear, namely that we undoubtedly lack many, indeed one might say most, of the basic data which we need to undertake the distributional description of our elements, if and when we succeed in isolating them. Nonetheless we cannot let this consideration deter us from seeking their identification, for if we do not have incisive understanding of what data we need, what hope have we of ever promoting their collection?

We might with justification carry the broad analogy with chemistry a rung or two further up the ladder beyond the element and isotope. The geographer, even as the chemist, must identify and describe structures of combination among his elements. Though perhaps somewhat hazy as to precisely what our elements and their characteristics may be, we are well aware that they occur, not in isolation, but rather in combinational association. In his hierarchy of arrangement, the chemist recognizes the radical, a functional group of atoms that behave as a unit, and the compound, a specific substance formed by the union of two or more elements or radicals in definite proportions. Though the agricultural geographer has hardly begun to find them, it seems safe to assert that he likewise is confronted with functional groups of elements which tend to unit behavior, as well as more elaborate combinations of elements and radicals that are truly compounds.

I have made an admittedly crude, and certainly tentative, attempt at the statistical definition of crop and livestock combination regions in the Middle West. The results have appeared during the past three years in the Geographical Review and Economic Geography. These efforts might perhaps be thought of as leading toward the establishment of the equivalent of a chemists' radical, so far as the agricultural geography of that capacious segment of the United States is concerned. The work is inadequate on a number of counts. In the first place, there is insufficient understanding of the true nature of the elements being dealt with, and certainly there is only incomplete data with which to describe them. Furthermore, the measurements of crop combinations, though made with reference to both area and time, deal only with relative land occupancy strength, and do not reveal the true functional associations that could be derived only from the use of additional criteria of measurement. Moreover, the statistical theory utilized is no more than experimental. In spite of such limitations and shortcomings, however, it is offered in the optimistic hope that this kind of research carries the viable seeds of ultimate advance to better inventory and description.

If in the Middle West, as well as elsewhere in sizeable sections of the earth, we could establish fully rounded functional unit radicals for crops, and could do likewise with livestock, and if leading us to our discovery of such radicals we had the guidance of a solid, measured identification and description of the multiplicity of existing elements and isotope variants, we would have attained an outpost from which with real confidence we could strike for the compound, the agricultural region. The long range job of description is enormous in its complexity, and demanding in the levels of accuracy required. How can it be considered

inadequate within itself as a goal of achievement? How dare we face the distant frontier of interpretation without its accomplishment?

GEOGRAPHY IN THE SOVIET UNION

Chauncy D. Harris
University of Chicago

During May and June 1957 it was my good fortune to spend a month in the Soviet Union. The principal achievement of the trip was not research but the establishment of contact with a large number of Soviet geographers and institutions.

Two impressions stand out from this trip: (1) the friendliness of Soviet geographers and their sincere desire for international contacts, for learning about geographic work in other countries, and for the international recognition of Soviet work, and (2) the tremendous scale of geographic training and research programs in Soviet institutions.

Many Soviet geographers wished to express through me their good will toward their American colleagues. As a consequence a most cordial reception was extended to me on all sides. Altogether opportunity was made for me to talk in small groups with about 140 different geographers.

In addition I was generously invited to lecture at the All-Union Geographical Society in Leningrad, at the Geography Faculty of the University of Moscow, and at the Institute of Geography of the Academy of Sciences of the USSR in Moscow. Permission was asked to publish my talks on American agriculture and on American geography, one in the geographical series of Moscow University, the other in the proceedings of the Academy of Sciences. A total of about 500 people were present at these talks. Each talk was followed by an hour-long question-and-answer period.

Before my visit I was not completely uninformed about geographic work in the Soviet Union. Yet the vast scale of Soviet geographic work astonished me. The University of Moscow has a geographic staff of three hundred! The Institute of Geography of the Academy of Sciences of the USSR has a full-time research staff of about the same size. The Institute of Scientific Information now provides the most comprehensive international geographic bibliography in any language. The All-Union Geographic Society appears to be the largest society of geographers in the world. Not only the quantity but also the quality of the publications was impressive. I shall comment briefly on (1) Soviet geographic education, (2) research at the Institute of Geography, (3) bibliographic work, and (4) the geographic society.

(1) Soviet Geographic Education. Of 34 universities in the Soviet Union, 28 appear to have programs in geography, mostly in separate geographical faculties but some in combined faculties of geography and geology.

Only three of the faculties of geography in universities were visited, Moscow, Leningrad, and Kiev. These are probably the three largest and most complete. In each of these universities geography forms an independent faculty (comparable to an American school or college with a dean).

The Geography Faculty of the University of Moscow is a show-piece. It occupies six stories in the central skyscraper of the new university buildings on Lenin Hills, has perhaps a hundred rooms for laboratories, offices, and workrooms and a staff of 300 professors, docents, and assistants. The dean is A. M. Riabchikov, a specialist on the physical geography of India. There are 1,000 full-time day students in the 5-year geography course, 817 evening students, and 55 graduate

students. The Geography Faculty is composed of 14 departments: physical geography of the USSR, economic geography of the USSR, polar geography, soil geography, physical geography of foreign countries, economic geography of the peoples republics, economic geography of capitalist countries, general geography, geomorphology, hydrology of the land, oceanography, climatology and meteorology, biogeography, and geodesy and cartography.

The Department of the Economic Geography of the USSR, under the leadership of Iu. G. Saushkin, may serve as an example. The work of the department is grouped around six major subdivisions, each with a sizeable workroom: the Urals, Central Asia, European USSR, Siberia and the Far East, Regionalization, and Systematic Economic Geography (agriculture, industry, and cities). Typically each of these workrooms had four to six desks, a small working collection of books on the particular area, and maps. The workroom on Siberia and the Far East is under the direction of I. V. Nikol'skii. He showed the materials for one research project, the agricultural area northwest of Irkutsk, where there are about 200 collective farms. The study mapped in detail the distribution of cropland and forests, soils and vegetation, slopes, and types of farms. Since the collective farms are relatively large they make a convenient statistical unit in mapping, somewhat comparable to American minor civil divisions. Another study dealt with the evolution of rural settlement in the European part of the Soviet Union based on the censuses of 1897 and 1926 (the 1939 census was not published in detail). The study was exhibited by S. A. Kovalov, who is a member of a committee advising on certain aspects of the census planned for 1959. Another study, supported by the Stalingrad hydroelectric and irrigation project, concerned agriculture and its possible development by irrigation in the area between Stalingrad and the Caspian Sea, west of the Volga River.

The research program of the Geography Faculty is more highly organized than in an American university in the sense that many of the staff work on specific problems decided by the State. Four main areas are under investigation at the present time: (1) regionalization of the Soviet Union (research by about 40 people), partly contract research for Gosplan (the state planning committee); (2) land resources for agriculture, partly contract research for the Ministry of Agriculture; (3) snow and ice investigations in connection with the International Geophysical Year; and, (4) development of teaching aids, both cartographic and textual.

Of the 193 students who graduated from the 5-year course this year, 12% went into teaching positions; 44% went into practical applied work, mostly in governmental agencies; 31% went into research positions, particularly in the academies of sciences, and 13% went into no fixed positions (because of marriage or other reasons). A broad spectrum of agencies secured geographers from the University of Moscow this year: polar stations, hydrometeorological service, soil survey, cartographic service, ministry of railroad schools, ministry of electric power stations, geological survey, ministry of river transportation, ministry of sea transportation, ministry of agriculture, ministry of foreign affairs, and the Institute of Geography of the Academy of Sciences of the USSR. Scholarships covering room and board are held by 86% of the students. Tuition is free.

The Geography Faculty of the University of Leningrad does not have the palatial quarters of its Moscow counterpart. It has a staff of about 50. The dean is V. Kh. Buinitskii, an oceanographer. There are 500 students, and 8 departments: physical geography, economic geography, geomorphology, hydrology of the land, climatology, oceanography, botanical geography, and cartography.

The Geography Faculty of the University of Kiev occupies quarters that are just being rebuilt after the destruction of World War II. It has a staff of 50, 550 full-time students and 700 part-time students. Work is offered particularly in

the following fields: physical geography, geomorphology, hydrology, climatology, economic geography, and cartography.

The program for the students in all three universities is quite similar. The program at the University of Leningrad will be taken as an example. During the regular 5-year course the student takes 31 courses. Each typically lasts for the entire year (two semesters). General courses outside geography taken by all students include Marxism-Leninism, political economy, foreign languages, chemistry, physics, mathematics, and geology. Certain courses in geography are taken by all students regardless of later specialization by department within geography: general courses in physical geography, geomorphology, climatology, hydrology, geography of soils, economic geography, and cartography. Students specializing in economic geography take a series of more specialized courses: geography of agriculture, geography of manufacturing, field methods in economic geography, economic maps, statistics, economic regionalization, economic geography of the USSR, and economic and political geography of foreign countries. Specialists in physical geography study methods of physical-geographic research in the field, interpretation of aerial photographs, cartography in physical geography, physical-geographic regions, and the landscape. Persons specializing in climatology take courses in microclimatology, agricultural meteorology, dynamic meteorology, synoptic meteorology, methods of handling climatic data, and climates of the world. During the first year the students attend 32 hours of lectures each week!

The heavy lecture load is compensated for in part by two other parts of the study program. (1) The summers are spent in the field, typically for two years at a nearby field station, for a third year as a member of an expedition to some distant part of the country, and for the fourth year either as a member of an expedition or in independent research, in either case gathering material for the thesis. (2) During the second semester of the fifth year the student is engaged full-time in the preparation of his thesis, which must be defended publicly at the end of the year. These theses, typically about 125 pages in length, appear to be comparable with American master's theses. At the end of the five-year course the student receives a diploma. He then may enter secondary teaching, a government ministry, or a research institution.

A few students continue on with graduate work for the 3-year aspirantura course leading to the degree Candidate in Geographical Science. Perhaps about 10% of the diploma students later undertake such graduate work. The aspirantura theses are comparable with the American doctoral dissertations.

Only a small number of Soviet geographers earn the doctorate in geographical sciences. This degree is granted on the basis of substantial published works extending over a number of years after the candidate degree.

Of the 66 pedagogical institutes or teachers colleges in the Soviet Union, only two were visited: The Herzen Pedagogical Institute in Leningrad, and the Lenin Pedagogical Institute in Moscow. Both impressed me with the quality of work in geography for secondary school teachers.

The diploma course up to the present has lasted four years but is now being increased to five. Under the four-year program students in the first year had 36 hours of lectures; six hours each day Monday through Saturday. Except for the inclusion of courses in education and practice teaching, the geography program is somewhat similar to that in the universities, but less specialized. Most graduates go into teaching in secondary schools. At the Herzen Institute there are 250 full-time geography students, 220 evening students, and more than 300 correspondence students. The dean is B. N. Semevskii, an economic geographer. At the Lenin Institute there are 350 students majoring in geography.

In my talk at the Institute of Geography of the Academy of Sciences I was asked about my impressions of Soviet training in geography. At that time I indicated that it was my intention to be completely honest, objective, and candid in my reporting and that I should hope to be able to make exactly the same statements in both the Soviet Union and the United States. It seems appropriate, therefore, to quote my comments made at that time: "I shall mention at the outset two aspects of geographical training in the Soviet Union that appear to me less strong than other aspects: (1) Work outside the field of geography, that is work in the social sciences and humanities, strikes me as somewhat weak. . . . (2) The proportion of time spent in lectures and laboratory work strikes me as excessive. A total of 32 to 36 hours a week in lectures and laboratory seems to me more appropriate to a middle school than a university. . . .

"Now let me speak of the strong points.

"The training in geography and related disciplines strikes me as very thorough, more thorough than by students at comparable ages in American institutions. I think your students receive a better balanced and more comprehensive training in all aspects of physical geography than do ours at comparable stages.

"I have been delighted at the strong work in soil geography and at the close coordination of work in soils with other aspects of geography. At both pedagogical institutes and at universities I have seen excellent teaching exhibits of soil profiles in association with vegetation types, climates, and agricultural crops. At the Moscow State University both in the regional laboratories and in the great museum of geography, the soil exhibits are the best I have seen anywhere in the world.

"The work in cartography seems to me to be very good.

"In my own field of economic geography I have been struck by the quantity and by the quality of detailed studies that are being made. A rich storehouse of significant materials is being built up, of which I was previously totally ignorant.

"Your program of summer training, insofar as I am able to judge by descriptions of it, seems to be superb. From the very beginning your students get sound practical experience in the field of all aspects of geography and soon are engaged in actual research expeditions. . . .

"The program of a half year devoted to the diploma thesis also seems to me very good. The theses I have examined at the Moscow State University impressed me by the extent to which they were based on concrete material gathered directly in the field.

"At times in the past some Soviet writing in geography has seemed to me as dealing excessively with abstract generalizations without sufficient regard to actual conditions. I am pleased to say that on this trip to the Soviet Union I have not observed such shortcomings in current work.

"One of the most impressive features of geographic work in the Soviet Union is the smooth flow of well-trained geographers into teaching in secondary schools, into research institutes and institutions of higher learning, and into governmental agencies concerned with practical problems in developing irrigation or power projects, agriculture, or transportation."

(2) The Institute of Geography of the Academy of Sciences of the USSR. This institute is under the directorship of Academician I. P. Gerasimov, chairman of the Soviet national committee for the International Geographical Union. Liaison with foreign geographers tends to be the concern of M. B. Gornung, who is a secretary of the Soviet committee for the International Geographical Union and who speaks French and English. A staff of about 300 is engaged in full-time research. Work is organized under ten sections: physical geography, geomorphology, climatology and hydrology, biogeography, economic geography of the

USSR, geography of the democratic republics, geography of capitalist countries, cartography, history of geography, and glaciology. Each has an average of 30 staff members. There are also four laboratories: pollen analysis, biochemical analysis, photography, and stereogrammetry. Four field stations are maintained, one near Moscow, one in the northern Urals, one in Novaya Zemlya, and one in the Tian'-Shan'. The institute has a publication program of journals and books, issued either directly by the Academy of Sciences or by the Geographical Publishing House.

The work of the section on the economic geography of the USSR, under the direction of S. N. Riazantsev was observed in more detail. It is engaged in the preparation of a series of monographs treating each of the major regions of the Soviet Union. The entire country is expected to be covered by 1960.

In the section on geography of capitalist countries, four individuals are working on the United States: V. M. Gokhman (author of a recent large monograph on heavy industry in the United States), M. E. Polovitskaia (author of a large recent monograph on economic regions of the southern United States), V. P. Kovalevskii, and V. M. Andreeva. An 800-page monograph on the northern part of the United States is in preparation. I examined a score of maps compiled in connection with research for this volume and was struck by their accuracy and, in some cases, originality.

The institute is under vigorous and able research leadership. Probably nowhere else in the world is there a comparable concentration of resources in a single institution devoted solely to geographic research and publication.

(3) The Institute of Scientific Information. This institute attempts to provide a complete bibliographical and abstracting service on the geographical literature of the entire world. It publishes a monthly Reference Journal, Geography (Referativnyi Zhurnal: Geografiia), each issue of which contains more than 2,000 bibliographical references and abstracts. This journal goes to the universities and research institutions throughout the country and any individual may order from the institute a photostat of any article cited. Individuals thus are freed from much bibliographical tedium.

The institute receives more than 600 geographical periodicals (and 12,000 journals that may contain an occasional article of geographic interest). A staff of 35 under the direction of V. V. Pokshishevskii works at the institute on geographic materials. But most of the abstracts are written by specialists outside the staff, to whom photocopies of articles are sent for reporting. In sheer volume the journal of this institute is larger than the three other principal world bibliographical aids combined (Current Geographic Publications, Bibliographie Geographique Internationale, and Geographisches Jahrbuch)! The abstracts are objective and factual. The bibliographical material is particularly rich for the Soviet Union and for the peoples democracies, including China.

(4) The All-Union Geographical Society. The Geographical Society has headquarters in its own building in Leningrad. I was received there by a group headed by Professor S. V. Kalesnik, a vice president of the society and one of the delegates at Rio de Janeiro in 1956. The society has seven thousand members, mostly professionally trained geographers or workers in related fields. The society also has nearly a hundred branches scattered throughout the entire country. Some of these, as the one in Moscow, have important programs and publications.

The society carries on an active lecture program. During the month of May 1957 the posted printed schedule announced seven general popular lectures (with slides and motion pictures) and 24 smaller meetings of specialized sections or commissions. All are free.

The library, reported to be the best geographic repository in the Soviet Union, has 300,000 volumes, perhaps half on the Soviet Union. It has a small reading room and a battery of different card catalogues, including a regional bibliography of the Soviet Union, and an author catalogue including journal articles by Soviet authors. There are also a small map library and a large manuscript collection of explorers notebooks. The Izvestiia of the society is the oldest geographical periodical published in Russian.

In a small meeting at the Presidium of the Academy of Sciences of the USSR Academician Gerasimov spoke warmly of the desire to improve scientific contacts between the Soviet Union and the United States. He proposed four means:

(1) Publication in each country of general summary articles on the geographic work of the other country.

(2) Publication of more detailed specialized articles on individual topics.

(3) Translation of major monographs. A Russian edition of American Geography: Inventory and Prospect is now in press.

(4) Personal contact, travel, and scientific field work on some reciprocally agreeable basis; an exchange of delegations to study work in each other's country, on the pattern of the exchange of farm delegations.

These proposals are worthy of serious consideration. After many years of isolation one from another, two active and vigorous groups of geographers now appear to have an opportunity for improved scientific relations, and, with luck and determination, perhaps even for field work.

Note: Mimeographed copies of detailed notes on the programs and personnel of each institution visited are available from the author on request.

USE OF A PHOTO COPY MACHINE IN MAP REPRODUCTION

G. D. Taylor and M. C. M. Matheson
Department of Recreation and Conservation
Victoria, B. C.

Geographers are often faced with the problem of preparing reports that require many maps. The preparation of these maps is usually time consuming and often delays the presentation of the report. We have experimented with the use of a photo copy machine in an effort to reduce the time involved in map preparation while not reducing the quality of the map. These experiments have convinced us that these machines are of great value in reproducing black and white maps of report size.

Several methods of reproduction have been successfully used. Good quality copies of original maps may be printed directly on positive paper. Maps drawn in ink or pencil on opaque or transparent materials may be reproduced by this method.

It is possible to transfer an original map onto a transparency which can be used to obtain ozalid prints. This method is useful when it is necessary to reproduce many copies of a drawing for distribution. Copies can be obtained from line drawings or from maps and graphs which have appeared in publications. Good quality reproductions may be obtained without the necessity of redrafting or normal photographic copying.

A photo copy machine enables wax-backed type or zip-a-tone patterns to be used safely for ozalid reproduction. The desired type and patterns are applied directly to the original drawing and photo copied onto a transparency which may then be put through the normal ozalid process.

A considerable saving in drafting time may be effected in preparing a series of comparable maps from a single base. Once the original base is drafted, positive paper prints are made. Such prints may be modified by deletion or addition of line work and lettering. Ordinary drafting ink or pencil may be used on the positive paper to make the required additions. Zip-a-tone patterns and wax-backed type may also be applied to such positives. Deletions are made by scratch knife or white opaquing fluid. The altered print may then be used as an original for reproduction of further prints or of transparencies with no loss of quality.

Another time-saving method when only part of an original map is needed is to cut a section from a large map and attach it to a piece of standard white paper with the addition of a black line border and a title block. A good quality black and white copy or a transparency can be made from this patch work map.

There are limitations to the use of a photo copy machine which should be noted. The size of map which may be reproduced by this method is limited by the machine and paper sizes available. No reduction or magnification of the map is possible. Further, the quality of reproduction is not always consistent, although with care and practice this difficulty can be overcome.

Geographers should not overlook the possibilities of a photo copy machine as an aid in report preparation.

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of the

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EXECUTIVE COMMITTEE RECOMMENDATIONS

The Executive Committee of the AAG met at the Library of Congress on November 2. The Secretary reported on Council actions by mail ballots since the April meetings at Cincinnati, and the Editor of the Professional Geographer and the Chairman of the Cartography Committee presented problems connected with their work for the Association. The Treasurer presented and explained a proposed budget for 1958. The Executive Committee reached agreement on 25 items of business and, in accordance with Art. IV, Sec. 3 of the Constitution, submitted their recommendations to the full Council for consideration and reaction by mail ballot.

Council actions by mail ballot since April 1957 have approved the following items of Association business:

1. Dallas was chosen as the location for the annual meeting of the Association in 1960.
2. Lois Olson was appointed Chairman of the Placement Committee.
3. Robert Voskuil's appointment as Chairman of the Cartography Committee was confirmed.
4. Stephen B. Jones was appointed to succeed John K. Wright whose term on the Editorial Board for the AAG Monograph Series expired this year.
5. Erwin Raisz was appointed Editor of the newly approved "Map Supplement to the Annals."
6. The Pacific Science Association was asked, through the National Academy of Sciences, to establish a Geography Section for the Tenth Pacific Science Congress, which will meet in Honolulu in 1961.
7. Recommended to the Pacific Science Association that John Wesley Coulter be among those to organize a program for the Geography Section (if established) at the Tenth Congress.
8. Appointed L. G. Wolf to replace J. W. Coulter, until the next annual meeting of the Association, as a member of the Committee on Exchange of Publications.
9. Approved membership of the Program Committee for the 1958 annual meeting: James Parsons (Chairman), John Borchert, H. Bowman Hawks, Karl Pelzer, Edward Price, Merle Prunty, Richard Thomen, and H. Louis Kostanick (Local Arrangements Chairman).
10. Appointed Alfred Meyer as delegate to the American Association for the Advancement of Science, and Louis Ray to serve as Program Chairman for Section E meetings at the AAAS convention in Indianapolis, Indiana.
11. Granted $500 to Wilbur Zelinsky from the General Research Fund.
12. Approved memorialization in the Annals for the following: J. B. Kincer, Roderick Peattie, Charles C. Adams, George T. Renner, Sidman P. Poole, Malcolm Proudfoot, and John L. Rich. Recommendations that eight other deceased members be so memorialized were disapproved.
13. Approved a contract with the International Cooperation Administration to pay dues in the Association for qualified foreign geographers who have participated in ICA programs.
14. Selected Glenn Trewartha as a nominee for ACLS support to attend the IGU meetings in Tokyo (but he was unable to accept).

15. Approved copyright release for a Spanish translation of the Nature of Geography.
16. Accepted recommendations of Local Arrangements Chairman, Edwin Foscue, to hold the Dallas meeting April 18-23, 1960, with the Statler-Hilton as the headquarters hotel.

Additional business items approved by the Executive Committee November 2 and submitted to the Council for consideration are listed below. Should any of the recommendations be disapproved by a majority of the Council through mail balloting now in progress, a note to that effect will appear in the next issue of the Professional Geographer.

1. Purchase of an electric typewriter for the AAG Central Office. (The office cannot continue to depend entirely upon borrowed typewriters, and the new machine will be available to set up copy for the P.G.)
2. Amendment of minutes of the Council meeting of March 30, 1957 (Item 15, No. 1) to clarify the duties and responsibilities of the Editor for the "Map Supplement to the Annals."
3. Appointment of a sixth member of the Cartography Committee to arrange and organize the non-commercial map exhibit at the Association's annual meeting in 1958. (Acceptance not yet received.)
4. Authorization for the Southeastern Division of the AAG to sponsor future issues of the Directory of College Geography (thus putting the Association's name on it) if the Division will assume responsibility for that publication.
5. Extension of the appointment of Walter Kollmorgen as Editor of the Annals for another three years, with thanks for services already rendered to the Association.
6. Establishment of a Committee on Status and Trends of Geography in the U.S. (to prepare a report at least every two years for submission through the State Department to the Commission on Geography in the Pan American Institute of Geography and History, as well as for separate publication and distribution by the AAG.)
7. Rejection of a proposal to sponsor an English translation of Geographie Universelle, on the grounds that the expense and work would not be justified by increased use of the publication.
8. Discharge of the Publications Review Committee with thanks for its completed report.
9. Changing names of the Association's special funds to make them more explanatory for the purposes of the respective funds:
   a. Joint Research Fund to become the Annals Support Fund.
   b. Royalties Fund to become the General Research Fund.
   c. Atwood Fund to become the Atwood Research Fund.
10. Establishment of capital limits of $10,000 on the Annals Support Fund, and $5,000 each on the General Research and Atwood Research Funds.
11. Establishment of percentage ratios of 50%, 25%, and 25% respectively for distributing securities income among the Annals Support, the General Research, and the Atwood Research Funds.
12. Appointment of Atwood, Gerlach and Harris as a Committee to investigate further possibilities for relocating the AAG Central Office in Washington, New York, Philadelphia, or one of the several universities which offered space and facilities.
13. Recommendation that the ACLS provide travel support for an AAG member (L. A. P. Gosling) to attend the Ninth Pacific Science Congress in Bangkok.
14. Recommendation that the Local Arrangements Committee for the 1958 annual meeting make the best of available facilities in the Santa Monica area instead

of shifting the site to downtown Los Angeles. (The Mira Mar Hotel has not yet begun construction of new facilities promised for AAG use, but several other hotels, motor courts, and clubs within a few blocks can provide good facilities. The advantages of a Santa Monica location - freedom from smog, good beach, nice scenery, relatively low cost, proximity to UCLA, etc. - were considered more important than the advantage of centralized meetings in a downtown hotel.)

15. Approval in principle of sponsoring a visit to the U.S. by a group of Russian geographers in exchange for sending a group of American geographers to the USSR for a comparable visit.
16. Discharge of the Television Committee, due to disappearance of the programs which were to be monitored.
17. Continuation of the Committee on Geographers in Business to complete a report now in progress.
18. Discharge of the Committee on Trends in Training and Placement of Geographers, pending receipt of its report in final form.
19. Appointment of a Committee on Military Geography, to provide advice requested by the Command and General Staff School at Fort Leavenworth, Kansas.
20. Discharge of the Committee on Geography of the Americas with regret that the Association lacks finances to support the program of regional research and publication proposed by the Committee.
21. Appointment of three members to serve on a joint committee, with three members from the National Council for Geographic Education, in revising the pamphlet on A Career in Geography.
22. Distribution of the P.G. to the Editor of the Scholastic Teacher for one year. (The editor requests this help, so he could better inform his reading audience of 100,000 elementary and high school teachers about developments in the field of geography.)
23. Sending a national officer of the AAG as a delegate to annual meetings of the Canadian Association of Geographers.
24. Requesting Council selection of members to be memorialized in the Annals (12 deceased members recommended since the meetings in Cincinnati last April).
25. Acceptance of the proposed budget for 1958. (See page 24)

YOUR PLACEMENT COMMITTEE

The AAG Placement Committee is a group of your fellow members whose function is to establish contact between employers of geographers and geographers looking for new jobs. The Committee was established at the end of World War II. At that time, geographers who had served in the Armed Forces were returning to civilian life; others with practical geographic experience in wartime government agencies were being released. Simultaneously, the demand for geography in universities, particularly on the graduate level, increased rapidly. The placement of the newly released geographers in the suddenly enlarged field of geography was a problem too complex to be handled on a personal basis or even by universities. This was the problem that devolved upon the newly created Placement Committee.

Gradually a balance was established between geographers seeking new work and the positions available to them. As the situation changed, the work of the Placement Committee necessarily changed, and it must remain flexible. The general procedures established after World War II have continued, with some modification. The basic tool of the Committee is the Placement File Data Card, which

must be filled out by every applicant. On the card, he provides information concerning his education, topical or areal interests, experience, language proficiency, type of employment preferred, acceptable rank and salary, and locational preference.

When a potential employer notifies the Placement Committee of a vacancy, he describes the job and states qualifications needed. For a teaching position he specifies educational requirements, courses to be taught, number of courses per quarter or semester, opportunities for further research, salary, advancement, and other factors that are pertinent to the specific job. Non-teaching positions are generally more specialized and requirements must be stated in even greater detail.

Upon notification of an opening, the Placement Committee examines all cards on file and selects those geographers who seem most nearly to fill the requirements. Sometimes, only 4 or 5 have the training and experience needed; for other openings, 16 or 18 may qualify. Candidates are selected solely on the basis of qualifications as stated on their placement cards. The geographers selected are notified of the opening and are given the basic information concerning it. The Committee does not send the employer a list of the candidates notified. The candidate, himself, is responsible for establishing contact with the employer and providing him with whatever information is needed. The candidate, however, is asked to let the Committee know whether or not he has applied and, if not, to give his reason. If he fails to do so within a reasonable time, his name is dropped from the placement files until he notifies the Committee of his continued interest.

The functions of the Committee are inevitably limited by time factors, since all of the seven Committee members have full-time professional jobs. Nevertheless, procedures are constantly being improved and new types of services considered -- in this connection suggestions from AAG members will be welcome. The Committee, however, cannot operate as a full-scale employment agency. It cannot provide employers with dossiers on candidates, nor can it make a systematic search for possible openings for geographers.

AAG applicants for jobs have a responsibility to the Committee, particularly in keeping the placement files up to date. Last September, the Committee found that more than 50 of the applicants listed in the placement file had not revised their data since 1955. In all these cases the geographers were asked to file new cards if they were still interested. Soon, those who filed cards during the first half of 1956 will receive similar requests. Sooner or later, notices will be sent to everyone whose name is now on file. But why wait? If you have received your A.M. or Ph.D. degree since you filed a card, have studied Russian or Arabic, or find that you could not live on the salary you once considered acceptable, let the Placement Committee know about it. If you do, the Committee will not worry you with notices of vacancies that are not of interest to you; on the other hand, you may become eligible for jobs that are more in line with your current interests.

Cooperation of employers is also helpful in improving the services of the Placement Committee. The applicants notified of a vacancy may not meet the needs of an employer; an employer may hear from too few of the candidates to make an effective selection; or, in an extreme case, none may apply. Such circumstances should be reported to the Committee. Reasons for non-acceptance of candidates should be given and further information concerning qualifications required should be provided. The Committee is always willing to review and supplement an earlier selection.

The members of the Placement Committee appreciate the cooperation we have received in the past and are sincerely interested in giving AAG members --

both applicants and employers -- the best possible services within the limits of our capabilities. With this as a goal, we request your continued interest and cooperation.

---AAG Placement Committee

INTERNATIONAL FELLOWSHIPS AND RESEARCH GRANTS

This report contains a partial listing of grants for travel, study, and research abroad for which there are no closing dates or for which the closing dates for application will occur during the late winter and spring of 1958. It is planned to publish a list of grants with autumn and early winter closing dates in the July 1958 issue of the Professional Geographer. For a more complete discussion of available grants, refer to the November 1956 and January 1957 issues of the Professional Geographer.

During the past several years the closing dates for many of the grant programs have fluctuated, and this year the closing dates on a number of programs have been advanced from one to three months. Prospective candidates are cautioned to watch for changes in closing dates, and to prepare grant applications well in advance of anticipated dates of closing.

Several listings of funds available for foreign travel, study, and research have now been published by the Committee on International Fellowships, but suggestions and comments for the improvement of the type of service which the Committee might provide for the membership are urgently needed. We should particularly like to know what kinds of fellowship information would be most useful in the future.

American Philosophical Society. 105 South Fifth Street, Philadelphia 6, Pa.

Awards are unrestricted as to field of research, and are not subject to any particular eligibility requirements. Grants are of varying amounts, and are made in support of research expenses, including the costs of collecting material and for special equipment needed in research, but are not made for salaries, fellowships, scholarships, expenses of publication, or expenses in connection with a doctoral dissertation. The Committee on Research meets five times a year, in early February, April, June, October, and December, and applications must be submitted one month prior to a Committee meeting.

The Australian National University, Canberra. Application forms for fellowships at the Australian National University leading to an advanced degree are obtainable from the Australian Embassy, 2941 Massachusetts Ave., Washington, D.C.

A small number of scholarships are offered by the Australian National University in Canberra to persons who intend to become candidates for the Ph.D. degree. Scholarship tenure is normally for a period of two years, with possibility of renewal for a third year. Awards include a living allowance of $1,649 per year plus additional amounts for married scholars with children ($416 for the first child $104 for each additional child), cost of travel to and from the university, up to $104 for moving expenses, and special allowances for scholars conducting field research away from Canberra. Closing date for application has previously been October 15, with tenure in Canberra beginning the following March.

Bollingen Foundation, Inc. 140 E. 62 St., New York 21, New York.

The Bollingen Foundation, Inc., does not support research in the field of geography as such, but grants-in-aid or fellowships might be available to persons planning to conduct field research of a definite anthropological or archaeological nature. Fellowships are usually for a term of from one to three years, with stipend ranging from $1,200 to $3,600 a year. A few grants-in-aid of less than $1,200 are available. Awards are made each autumn, so candidates should plan to apply no later than the preceding summer.

Buenos Aires Convention Program. U. S. Government Grants for Graduate Study Abroad. Apply through the Institute of International Education, U. S. Student Program, 1 East 67th Street, New York 21, New York.

Candidates for U.S. Government Grants for graduate study in Latin America under the Buenos Aires Convention must have American citizenship, a college degree before the beginning of the award period, and knowledge of the language of the country in which study is proposed. Preference is given to applicants who are not over 35 years of age and who have not had an opportunity for extended travel and study in Latin America. Initial selection of recipients is made by the Institute of International Education. The governments of the host countries make the final selection. Awards are for a period of one year. Affiliation with an approved foreign educational institution is required. Grants are made in the currencies of the host countries, and include travel and living expenses. No travel or maintenance allowances are available for dependents. Applicants may make separate applications for two countries.

Countries participating in the Buenos Aires Convention Program are: Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, and Venezuela.

Competition for the 1959-60 program will open May 1, 1958, and will probably close November 1, 1958.

The Henry L. and Grace Doherty Foundation. Fellowships for advanced study and research in the social sciences in Latin America. Apply through the Doherty Fellowship Committee, Woodrow Wilson School, Princeton University, Princeton, New Jersey.

Fellowships are open to all those who wish to pursue post-doctoral research in Latin America, but grants are made preferentially to scholars under age 40. Preference will also be given to persons whose projects involve study in Chile. The grants of up to $3,000 for a single person include transportation and maintenance for twelve months. Grants of up to $5,000 may be made to candidates with dependents to cover their travel and maintenance costs. Closing date for applications is February 1, 1958.

Fulbright Act (Public Law 584 - 79th Congress). U. S. Government Grants for University Lecturing and Advanced Research Abroad. Apply through the Conference Board of Associated Research Councils, Committee on International Exchange of Persons, 2101 Constitution Ave., Washington 25, D. C.

Applicants must be American citizens and should have their doctorate plus

at least one year of experience in lecturing in an American or foreign university. Visiting lecturers may ordinarily lecture in English, except in Austria, Belgium, France, Germany, and Italy. Those receiving grants as research scholars should be proficient in the language of the country where they expect to work.

Awards are made in the currency of the host country and include transportation for the grantee but not for dependents, a maintenance allowance which may be scaled to provide for the living expenses of up to four dependents, and a small allowance for travel in the host country and for purchase or books or equipment. A dollar grant under the Smith-Mundt Act (Public Law 402, 80th Congress) may be given in certain cases to supplement the awards of lecturer grantees.

Applications are accepted between March 1 and April 15 for countries where the academic year begins in the period March through June. These countries are: Australia, Burma, Ceylon, Chile, India, New Zealand, Peru, Philippines, and Thailand.

For countries with the academic year similar to that in the United States, applications will be received during the summer of 1958. These countries are: Austria, Belgium and Luxembourg, Denmark, Finland, France, Egypt, Germany, Greece, Iraq, Italy, Japan, Netherlands, Norway, Pakistan, and the United Kingdom and Colonial Territories.

Fulbright Act (Public Law 584 - 79th Congress). U. S. Government Grants for Graduate Study Abroad. Apply through the Institute of International Education, U. S. Student Program, 1 East 67th Street, New York 21, N.Y.

Candidates for the graduate phase of the Fulbright program must have American citizenship, a college degree before the commencement of the award, and knowledge of the language of the country in which study is proposed. Preference is given to applicants who are not over 35 years of age, and who have not had extended opportunity for foreign residence, travel and study, excluding time spent abroad in the armed services of the United States. Awards are for a period of one year, and renewals are not ordinarily considered. Enrollment in or affiliation with approved foreign educational institutions is required. Grants are made in the currencies of the host countries, and include transportation and living expenses. No travel or maintenance allowances are available for dependents. Countries participating in the Fulbright program are: Australia, Austria, Belgium and Luxembourg, Burma, Chile, Denmark, Finland, France, Germany, Greece, India, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Philippines, and the United Kingdom. Applicants may apply for only one country. Opening date for applications for the 1959-60 academic year will be May 1, 1958. Closing date will probably be November 1, 1958.

The Geological Society of America. Research Grants. Address: 419 West 117th Street, New York 27, N. Y.

Research grants are made only in support of work of a geologic nature. Ordinarily awards are made only for projects in North America, unless research outside the continent were to have a direct bearing on aspects of North American geology. Stipends are variable in amount and cover travel and field maintenance costs and other direct expenses involved in the completion of a research project, but under most circumstances do not include salaries. Closing date for application is February 15, 1958.

McGill University. Graduate Fellowships in the Social Sciences and Humanities. Apply through the Faculty of Graduate Studies and Research, McGill University, Montreal, P.Q., Canada.

Graduate students are eligible for the one Arthur C. Tagge Fellowship, stipend $1,200, and the several University Fellowships, stipend $800, provided their interest is in phases of human geography. These awards do not carry with them remission of fees, which total $400 per annum. The University Fellowships are subject to renewal. Closing date for application is May 1, 1958.

Office of Naval Research. Address: Geography Branch, Office of Naval Research, Washington 25, D. C.

Research proposals are welcomed in the fields of coastal and island geography, regional and systematic geography, photo interpretation, and Arctic geography. Only those projects having the greatest scientific merit are supported by the Office of Naval Research. Careful consideration is given to the background and experience of the investigator. The applicant may request support in the form of normal salary for himself and any assistants, and to cover travel costs, clerical help, and purchase of essential equipment. The Office of Naval Research usually provides this support in the form of a contract with the institution with which the applicant is associated. Project proposals should be submitted several months in advance of the time the candidate would like to begin research. Proposals are reviewed by an advisory committee of the National Research Council.

Smith-Mundt Act (Public Law 402 - 80th Congress). U.S. Government Grants for University Lecturing Abroad. Apply through the Conference Board of Associated Research Councils, Committee on International Exchange of Persons, 2101 Constitution Ave., N.W., Washington 25, D. C.

Awards under the Smith-Mundt Act are for lectureships in certain foreign countries which do not participate in the Fulbright program. The list of actual countries which participate may change from year to year. Candidates must be American citizens and must have already established professional competence in their field. In addition, candidates must have had at least one year of college or university teaching experience. Ability to lecture in the language of the host country may also be required. Grants approximate the salary which the recipient would earn in his home institution, and a limited additional cost of living allowance may be provided for dependents. Awards cover transportation only for the lecturer. Funds are provided partly in dollars by the U.S. Government, partly in the currency of the host country by the institution with which the grantee would be affiliated.

The countries participating in the program actually initiate requests for lecturers in stipulated fields. These requests are then met from a roster of qualified lecturers prepared by the Committee on International Exchange of Persons. Consequently, interested persons are asked to register with the Committee on International Exchange of Persons.

Participating countries are: Afghanistan, Bolivia, Brazil, Central African Federation, China (Taiwan), Costa Rica, Cuba, El Salvador, Ghana, Guatemala, Haiti, Honduras, Iceland, Iran, Korea, Lebanon, Libya, Mexico, Nigeria, Panama, Paraguay, Portugal, Spain, Sudan, Sweden, Switzerland, Syria, Union of South Africa, Uruguay, and Vietnam. Additional participating countries in 1958-59 may include Ceylon, Egypt, Iraq and Liberia.

There is no closing date for application.

Wenner-Gren Foundation for Anthropological Research, Inc. 14 East 71st Street, New York 21, N. Y.

The Wenner-Gren Foundation Inc., does not support research in the field of geography as such, but grants-in-aid or fellowships might be available to persons planning to conduct research of a definite anthropological nature. Grants in-aid are awarded to individual scholars affiliated with accredited institutions and organizations. It is not likely that the grants will exceed $3,000. The projects proposed should be neither long range nor large scale. No specific closing date.

---Donald Patton and Walter Deshler
Committee on International Fellowships

PROPOSED BUDGET OF THE ASSOCIATION FOR 1958

Part I - Normal Operations of the Association

A. Income			
1. Dues	$26,000	$26,000	
2. Journal Publications			
Annals	5,000		
Professional Geographer	1,500	6,500	$32,500
B. Expenditures			
1. Administration			
Headquarters (rent)	2,500		
Moving Central Office	800		
New Equipment	1,700		
Central Office	9,000		
Officers expenses	200		
Travel	3,000		
Regional Divisions	800		
Committees	1,500		
Miscellaneous	500	20,000	
2. Journal Publications			
Annals	9,000		
Professional Geographer	2,500	11,500	31,500
3. Association Funds			
Return to Reserve Funds	1,000	1,000	1,000
			$32,500

Part II - Special Activities of the Association

A. Income			
1. Sale of Special Publications			
Nature of Geography	500		
American Geography	1,500		
Handbook-Directory	200	2,200	
2. Association Funds			
Atwood Account	500		
Royalties Account	500	1,000	$ 3,200
B. Expenditures			
1. Research Grants			
Atwood grant	500		
General research grant	500	1,000	
2. Special Projects			
Binding American Geography	1,200	1,200	
3. Association Funds			
Return to Non-Serial Publications Fund	1,000	1,000	$ 3,200

SUMMARY BUDGET 1958

A. Income	
Normal operations of the Association	$32,500
Special activities of the Association	3,200
	$35,700
B. Expenditures	
Normal operations of the Association	$31,500
Special activities of the Association	2,200
Return to Non-Serial Publications Fund	1,000
Return to Reserve Fund	1,000
	$35,700

REGIONAL DIVISIONS

New York-Ontario Division

The 1957 Annual Meeting of the New York-Ontario Division of the AAG was convened by the President, Lewis Alexander of Harpur College, on October 25 at Cornell University. About 65 geographers were in attendance.

The morning program, chaired by Vice President Hibberd V. B. Kline, Jr. was on industrial geography of New York State. The speakers were Robert Redden, State University Teachers College, Buffalo, on "The Kind of Industries in the Small Communities of Western New York"; Donald Roznowski, New York State Department of Commerce, on "Industrialization of the Southern Tier"; James M. Jennings, University of Pittsburgh, on "Manufacturing in the St. Lawrence Area" and John H. Thompson, Syracuse University, on "Where To - Manufacturing Geography?"

The afternoon field trip into the area between Lake Cayuga and Lake Seneca was lead by Howard Conklin, Professor of Land Economics at Cornell College of Agriculture.

The evening banquet was addressed by Herrell DeGraff, Babcock Professor of Food Economics, Graduate School of Nutrition at Cornell. His topic was "Population and Food Supplies."

The officers elected at the business meeting for 1957-58 were: Hibberd V. B. Kline, Jr., President, Robert Redden, Vice President, and Aubrey Diem, Secretary-Treasurer.

New England-St. Lawrence Valley Division

Boston University served as host for the 32nd Annual Meeting of the New England-St. Lawrence Valley Geographical Society on October 26, 1957. The attendance numbered over 100 despite Asian flu and gridiron classics.

After a welcome by Franklin C. Erickson, Chairman of the Department of Geography at Boston University, the group heard the following papers:

"Geographical Aspects of Rural Slum Development in Eastern Massachusetts" - George K. Lewis, Boston University

"Recent Studies in Desert Geography" - Peveril Meigs, Quartermaster Research & Development Center, Natick.

"Agricultural Land Use in Southern Japan" - Robert L. Anstey, Quartermaster Research & Development Center, Natick.

At the business meeting the new slate of officers was presented:

President: Shannon McCune, University of Massachusetts

State Vice Presidents:

Connecticut: Joseph B. Hoyt, New Haven Teachers College
Maine: Myron Starbird, Farmington Teachers College
Massachusetts: Robert N. Saveland, Ginn & Co., Boston
New Hampshire: Robert E. Huke, Dartmouth College
Rhode Island: Chester Smolski, R. I. College of Education
Vermont: Florence Woodard, University of Vermont
St. Lawrence Valley: Brian Bird, McGill University, Montreal

Secretary-Treasurer: Mildred Berman, State Teachers College, Salem

The afternoon program consisted of two field trips. One was concerned with industrial development along Route 128. The other was a study of urban renewal in Boston with a visit to the John Hancock Tower and a field survey of the "New York Streets" Redevelopment Plan of Boston's South End.

East Lakes Division

The fall meetings of the East Lakes Division of the AAG were held September 27 and 28 at the Gull Lake Biological Station near Kalamazoo, Michigan. The host for these meetings was the Department of Geography and Geology, Western Michigan University with William R. Brueckheimer primarily responsible for the arrangements.

At the Friday evening program Charles Ford, City Planner for the City of Kalamazoo, was the featured speaker. His talk was largely concerned with the role of the geographer in city planning. A field trip was taken on Saturday and included a tour of the Kalamazoo Vegetable Parchment Plant in Parchment, a picnic lunch at the Wolf Lake Fish Hatchery, a tour of John Woodman's Diversity Farms--one of the largest fruit growing establishments in southwestern Michigan, and a tour of A. Murch's Winery in Paw Paw, Michigan.

The spring meetings will be held on March 21 and 22 at the University of Michigan in conjunction with the Michigan Academy of Science, Arts and Letters meetings. Ross N. Pearson will act as local arrangements chairman.

New York Metropolitan Division

The winter meetings of the N. Y. Metropolitan Division are:

Topic: Reports on Our Own Work
When: Wednesday, January 22, 1958, 7:45 p.m.
Where: American Geographical Society
Program: 7:45 p.m. Coffee hour
8:15 p.m. Brief reports and discussion

This meeting is to include brief reports from New York Area Geographers on the substance of their current work. Anyone interested in making such a report should contact Dr. Alexander Melamid as soon as practicable so that he can organize the program.

Topic: Geography and Archeology
When: Sometime in March, specific date and time to be announced
Where: To be announced
Program: Dr. Wendell Phillips will discuss "Geography and Archaeology in Southern Arabia."

Middle Atlantic Division

The Middle Atlantic Division held its Fourth Annual Meeting on Saturday, December 7, 1957, in the National Academy of Sciences-National Research Council Building in Washington, D.C. William Horbaly, in charge of the program, and the members of his committee, Arthur R. Hall, Gordon Hull, and A. A. Munn, planned an excellent program. The morning session centered around urban geography. The presentation by James R. Wray, "The Form and Function of Peoria, Illinois: An Exercise in Graphic Urban Area Analysis" indicated some new techniques and methods for analyzing an area in detail. This was followed by a paper on "Schools, Parks, and Open Space--A Major Planning Problem"

given by John S. Hewins. The paper focused attention on this problem as it is being studied by the Maryland-National Capital Park and Planning Commission. Following an excellent luncheon, the afternoon session was devoted to papers on Antarctica. The three papers were: "American Activity in Antarctica Prior to 1950" by Kenneth J. Bertrand; "Some Climatic Anomalies in Antarctica" by J. Glenn Dyer; and "The Navy's Role in the U. S. IGY Antarctic Program" by Commander Paul W. Frazier. These papers pointed up the current interest in the Antarctic and each discussed a different aspect of the work being done in the area.

After the papers, a brief business meeting was held. The result of the election of officers for 1958 was announced. The new officers are: J. Warren Nystrom, Chairman, G. Etzel Pearcy, Program Chairman; Donald J. Patton, Field Trip Chairman; and Charlotte E. Taylor, Secretary-Treasurer. A motion was made and seconded that a vote of thanks be given to the outgoing officers for a job well done.

THE NATURE OF GEOGRAPHY

RICHARD HARTSHORNE

Published by
The Association of American Geographers
Fifth Printing

Copies may be obtained from the Central Office of the AAG, The Library of Congress, Washington 25, D.C. The price is $2.00 *plus* 20¢ for handling in the United States, *or* 25¢ for handling in other countries. In order to aid students, as in the past, this volume is sold at cost, with no royalties to the author.

ANNOUNCEMENTS AND REPORTS

IGU Regional Conference in Japan

The National Science Council of Japan and the Japanese National Committee of the International Geographical Union sponsored a regional conference of geographers in Japan from August 29 to September 3, 1957. It was an outstanding success. The sponsors made excellent arrangements including two field trips before the conference and three trips after the conference. Although the sessions included about 100 papers, time was allowed for local field trips and social occasions. Eighty foreign geographers, many of them from other Asian lands, joined 300 Japanese geographers for the meetings. The American delegation was comprised of about 20 geographers who had come from the United States plus a number of others presently residing in Japan.

The two pre-conference excursions were to Hokkaido and to the Tohoku Region, Northern Honshu. In these excursions certain themes, particularly the problems of rural land use and development, were stressed. Local geographers gave reports and data to supplement the field observations. Excursion parties were limited in size to some 20 persons and the schedules were not overcrowded so that useful field work could be done. Local officials furnished hospitality.

Fumio Tada, a Vice President of the I.G.U., was general chairman of the opening plenary session held at Tokyo University. Akira Watanabe, the Minister of Education, the Chairman of the National Science Council and President of the University gave greetings. A response was made by Dr. Ahlmann of the I.G.U. The major address was given by the Past President of the I.G.U., L. Dudley Stamp on "The Scope of Applied Geography."

During the next ten days concurrent sessions were held for professional papers by Japanese and foreign geographers. The papers usually summarized recent research and in total presented an excellent review of the character of Japanese and Asian geographers' research. European and American geographers were very favorably impressed with the high caliber of this work. A special symposium was held on the geographic problems of Southeast Asia on August 31. A special display of modern maps was most interesting.

On September 1 the conference moved to Tenri University near Nara. Special cars were attached to Japan's crack express train, the Tsubame, to take the foreign delegates along the Tokkaido, the historic route from Tokyo to Kyoto. The conference then continued in the same pattern combining sessions with field excursions. The map display was devoted to historic maps of Japan and Asia maps of the world. On the evening of September 2, the Reverend Nakayana, Patriarch of the Tenri religion, gave a festive sukiyaki party for about 400 geographers in the Great Hall of the church headquarters. This party will be long remembered by the participants. Geographers from all over the world have one thing in common - they enjoy good food and drink!

At the final session the major address was given by George B. Cressey on his field work in the Middle East. At the conclusion of the sessions in a special ceremony, Dr. Stamp and Dr. Ahlmann were presented with notifications of awards of medals by the Tokyo Geographical Society, the oldest geographic society of Japan.

The post-conference field excursions were unfortunately not as well attended as those of the pre-session. One trip went through the Inland Sea to Kyushu, in-

cluding its industrial area. Another group studied the industries of the Osaka area and the rural land use of the island of Shikoku. The third group went through Nayoga and into the mountain area of central Japan. Again, the field trip guides, especially prepared by local Japanese geographers, furnished excellent data. They were attractively printed and included maps, photos and charts. In total the introductory volume, the 5 field trip guides and the booklet on Tokyo constituted a unique and valuable source of information on contemporary Japan. It is hoped that they will be made widely available in some form to geographers throughout the world.

Much credit goes to the sponsoring groups for initiating this conference and for developing it, particularly for the Asian geographers. It is hoped that similar conferences can be held in other parts of Asia. The geography of this vast area is still too little known and studied. Geographers of these lands can profit greatly by contacts with their colleagues in Asia and elsewhere in the world. Certainly the regional conference in Japan set a very high standard for such future meetings.

---Shannon McCune

Geological Map of Asia and Far East

In November a group of senior geologists, mainly from Asian countries, held a series of meetings in Calcutta, under the auspices of the United Nations Economic Commission for Asia and the Far East. The task was to complete the compilation of the first regional geological map of Asia and the Far East for publication next year. On the basis of this map, other maps will be prepared showing the distribution of mineral resources in the Asian region. Such detailed geological and mineral maps are a prerequisite for industrialization and will fulfill a long-felt need.

1958 ACSM - ASP Meetings

The American Congress on Surveying and Mapping and the American Society of Photogrammetry will hold consecutive meetings from March 23 to 29, 1958 at the Shoreham Hotel in Washington, D. C. Geographers will be particularly interested in the exhibits and in the papers on cartography, photo interpretation, photo-geology and the applications of surveying and mapping to economic planning.

For further information write ACSM-ASP, 1515 Massachusetts Ave., N.W., Washington 25, D. C.

Adelene Moffat Fellowships

The Society of Woman Geographers is offering two Adelene Moffat Fellowships of $2,300 for the academic year 1958-59. The purpose of the fellowships is to encourage young women to do graduate work in geography. One fellowship will be given at Columbia University and one at Clark University. To qualify, an applicant must be eligible and acceptable for admission to the graduate schools of these universities and have a B.A. degree or its equivalent. A good background in the social sciences and in general geology or geography is desirable, but candidates who have given evidence of superior ability in other fields are also eligible.

Applications must be made on either the Columbia University fellowship application form or the Clark University fellowship application form. An indication should be made on the form that it refers specifically to the Society of Women Geographers Fellowship in Geography.

Applications for the Fellowship at Columbia University must be received on or before February 20, 1958. The awards will be made about April 1, 1958. Application forms and further information may be obtained from Office of University Admissions, 322 University Hall, Columbia University, New York 27, New York.

Applications for the Fellowship at Clark University must be received on or before March 1, 1958. The awards will be announced about April 1, 1958. Application forms and information may be obtained from the Director, Graduate School of Geography, Clark University, Worcester 10, Massachusetts.

Symposium on Lahontan Basin

The Sigma Xi Club of the University of Nevada will sponsor a symposium on problems of the Lahontan Basin on August 26-28, 1958. The purpose of this first symposium is to review the work that has been done in the basin of ancient Lake Lahontan and present the problems yet to be solved. The symposium will be held on the University of Nevada campus and is in conjunction with the annual meeting of the Great Basin Archeological Conference. Field trips to the basin are planned.

Additional information may be obtained from E. R. Larson, Executive secretary, Department of Geology-Geography, University of Nevada, Reno.

Landform - Photographic Index

The Geography Branch, Office of Naval Research, Washington 25, D.C. has for free distribution a limited number of copies of a U.S. Air Force "Index to Aerial and Ground Photographic illustrations of Geological and Topographic Features Throughout the World."

The index cites 603 unclassified photographs selected as exemplifying various types of landforms. The landform types are listed alphabetically under 20 headings on areas and countries. Each entry indicates geographical location, number and type of photos available and the negative numbers to be used for ordering. The prints are available to the public at a nominal charge for reproduction.

The index should be of use to most geography departments and the Geography Branch invites requests for this publication.

International Meetings - 1958

Canadian Institute of Surveying and Photogrammetry, Annual Meeting. February 5-7; Ottawa. Write: Miss C. M. Hatton, Sec.-Treas., P.O. Box 57, Westboro, Ontario, Canada.

1st Symposium on Natural Resources of Cuba. February 3-14; Havana, Cuba. Write: Dr. Robert H. Randall, Bureau of the Budget, Washington 25, D.C.

8th Pan American Consultation on Cartography. February 12-21; Havana, Cuba. Write: Pan American Inst. of Geography and History, Ex-Arzobispado 29, Tacubaya, D.F., Mexico.

Conference on Salt Marsh Research, sponsored by the National Science Foundation. Spring; Sapelo Island, Georgia. Write: Dr. Robert A. Ragotzkie, University of Georgia Marine Station, Sapelo Island, Georgia.

International Association of Sedimentology, Congress. Summer; Denmark. Write: The Secretary, International Association of Sedimentology, c/o Institut Francais du Petrole, 4 Place Bir Hacheim, Rueil-Malmaison, Seine et Oise, France.

International Federation for Housing and Town Planning, 24th Congress. August 31-September 6; Liege, Belgium. Write: Mr. V. Van Michel, 129, rue Feronstree, Liege, Belgium; or International Federation for Housing and Town Planning, Parkhotel, Molenstraat, 53, The Hague, Netherlands.

World Power Conference, Sectional Meeting: Economic trends in the production, transportation and utilization of fuel and energy production; hydraulic energy, thermal energy and other forms of energy; transportation; utilization. September 7-11; Montreal. Write: The Secretary, U.S. National Committee of World Power Conference, c/o Engineer' Joint Council, 33 West 39th Street, New York 18, New York.

International Union for Conservation of Nature and Natural Resources, 6th General Assembly and 7th Technical Meeting on Soil and Water Conservation. September 11-20; Athens, Greece. Write: International Union for Conservation of Nature and Natural Resources, 31, rue Vautier, Brussels, Belgium.

4th International Congress on Carboniferous Stratigraphy, Paleontology and Geology. September 15-20; Heerlen, Netherlands. Write: Sec., 4th International Carboniferous Congress, Geological Bureau, Akerstraat 86-88, Heerlen (L.), Netherlands.

5th Pan American Consultation on Geography, Commission on Geography of the Pan American Institute of Geography and History. Winter; Quito, Ecuador. Write: National Academy of Sciences-National Research Council, Washington 25, D.C., or Dr. Fabio de Macedo Soares Guimaraes, 129-8/1204 Avenida Churchill, Rio de Janeiro, Brazil.

International Society of Bioclimatology and Biometeorology

Last September there was held in Vienna a meeting of both international and interdisciplinary scope, on a subject of geographic interest: the effects of climate on organisms. This first scientific meeting of the new International Society of Bioclimatology and Biometeorology was attended by about 150 men, half of them from Germany and countries of the former Austro-Hungarian Empire where bioclimatology has had a long history, the other half from all parts of the world.

The interdisciplinary note was evident in the diverse points of view represented during the five days. However, contributors fell into two general groups: students of weather and climate, and biologists concerned with certain problems of plants, insects, animals and man that are felt somehow to derive from environmental factors, often undefined. The Congress helped these groups work toward common ground, primarily through providing examples of well conceived studies on specific relationships between precisely identified climatic processes and precisely measured phenomena of an organism -- heat loss, acclimatization, health or disease. These studies displayed considerable rigor in investigation. For example, in research on deaths from embolism, a degree of meteorologic sophistication is required not to include all fronts drawn on the weather map but only those whose passage was registered at the earth's surface; the emboli, of course, have to be evaluated with comparable medical skill. Without such care, research on these relationships can lapse into environmentalism of the weakest kind.

Work on spatial distributions ranged over areal scales of the micro-distributions significant to insects and plants and the special environments of shelters, to local climate and broad-scale distributions. Papers in microclimatology were numerous, and reflected many applications as well as a basic interest in terrain-caused variations in radiation, heat and other climatic elements. It is encouraging to see that microclimatology and bioclimatology still thrive in their ancestral homes, as in the lands to which they have spread. Later conferences at a score of

geographic and meteorologic organizations, though brief, indicate that the vigorous work in these broader fields also commands good facilities and generous support.

---David H. Miller

Pacific Science Congress

The Ninth Pacific Science Congress was held in Bangkok, Thailand, November 18-30. Although there was no Division of Geography, well over 20 geographers attended. Geographers participated especially in sessions of the Division of Anthropology and Social Sciences, Division of Conservation, and in a special symposium supported by UNESCO entitled "Climate, Vegetation, and Rational Land Utilization in the Humid Tropics." A smaller number of geographers made contributions in Divisions of Botany, Crop Improvement, Geology and Geophysics, Public Health and Medical Sciences, and Soil and Land Classification. Geographers participated prominently in several post-congress excursions.

The Council of the Pacific Science Association, recognizing the contribution which the field of geography is making toward the objectives of the Association, took official action to establish a Standing Committee on Geography. This action was recommended in resolutions by the Divisions of Anthropology and Social Sciences and Nutrition, and was requested in a petition submitted by the geographers present. The geographers nominated Albert Kolb as Chairman of the standing committee, and he was appointed by the Council. It appears likely that the Tenth Pacific Science Congress, to be held in Honolulu in 1961, will have a Division of Geography.

The following list of Americans attending the Congress may not be complete:

Anderson, Allen R.
Bailey, Walter H.
Blumenstock, David I.
Bowers, Neal M.
Cutshall, Alden
Drummond, Robert R.
Ginsburg, Norton S.
Huke, Robert E.
Johnson, Robert B.
Kuchler, A. W.
May, Jacques M.
Murphy, Grace B.
Murphy, Robert Cushman
Nesbitt, Paul
Pelzer, Karl J.
Quam, Louis O.
Spencer, Joseph E.
Townsend, George
Wiens, Herold J.
Wilson, Leonard S.

Geographers from other countries included Albert Kolb (Germany), L. Dudley Stamp (United Kingdom), Carl Troll (Germany), and Akira Watanabe (Japan).

One frequently heard praise of the fine job the Thais were doing in organizing and conducting the Congress. Chulalongkorn University proved to be an excellent place for holding the scientific sessions. Free services such as buses to and from the hotels, refreshments, and afternoon and weekend excursions contributed greatly to convenience and enjoyment. The unquestioned highlight of the entire Congress was the Royal Garden Party at Amphorn Palace. Also of great pleasure and interest was the Presidential Reception, a dinner followed by entertainment including classical Thai dancing and Thai boxing. A further indication of the generous and tireless efforts of the Thais was the scheduling of 14 post-session tours.

---Walter H. Bailey

1958 Cartography Issue

It is planned to make September 1958 Professional Geographer an issue mainly devoted to Cartography. Papers, news notes, observations on techniques, and other items of interest for this special publication are now in order. Cartographers and others with cartographic subject matter are urged to submit papers and other materials of interest as soon as possible. Long articles are not suitable for presentation. June 1, 1958, is the deadline for contributions. Mail all cartography material for this issue to: Fred W. Foster, Department of Geography, University of Illinois, Urbana, Illinois.

Abstracts are Due March 15

Abstracts of papers to be presented at the AAG Annual Meetings in Los Angeles must be sent no later than March 15 to Dr. James J. Parsons, Department of Geography, University of California, Berkeley 4, California.

LETTER . . . . .

Dear Reader:

By the time you have reached this page you will have already noticed that the P. G. has a new look. We hope that you are pleased with the appearance of this issue but warn you not to become too enamored of it because the March issue will again be different. Now it isn't that we are just being capricious or indecisive. Nor are we thoughtlessly casting aside the old familiar format simply to have a change. We're as sentimental about old familiar things as the next one, but the comfortable little world of the P. G. has been rocked, and cold, unsentimental reality has forced us to change our ways. The story is this: The P. G. had been happily humming along using borrowed equipment. Then suddenly our borrow-ability broke down and there we stood with copy but no machine. But crisis promotes unity and action, so when the P. G. took its troubles to the Executive Committee and the Publications Committee there was prompt authorization to purchase an electric typewriter capable of doing our job

By the March issue we hope to be using our very own machine which will have a type very similar to the old type. In the meantime, while awaiting delivery, we are using another borrowed machine.

We most gratefully offer our thanks to everyone who aided us in our dark hour. To the members of the Executive Committee for their sympathetic understanding and prompt action, to the Central Office Manager for her tireless efforts to obtain just the right machine for our purposes and to Mrs. Grace Fraley who valiantly faced and conquered the complexities of a new machine and made the adaptations for the new format, we say a heartfelt "Thank you very much."

---The Editor

Dear Editor:

I am a Fulbright Lecturer in Geography at the University of Peshawar this year, and I thought the readers of the Professional Geographer might like to know something about the department here.

There are three colleges and the University in this area. The colleges are Frontier College for Women, Islamia College and Edwards College. The first two

offer undergraduate degrees in Geography. The University, which was organized in 1950, offers the M.A. in Geography, having started the program only last year. The M.A. is a two year program: degrees are granted if all end-of-the-year examinations (called "papers" here) are passed with satisfactory marks. The syllabus is Pakistan-wide, and the examinations are made up and graded by some anonymous geographer from another institution. There are, this year, 5 students in the "first year postgraduate" class, and 5 students in the final year class. The staff members in the University are Mr. Durrani, the chairman; Mr. Hamiduddin; and Mr. Jehanzeh Niaz.

The University and Islamia College are located outside of the Peshawar Cantonment some five miles -- on the road to the Khyber Pass, which is about 12 miles away.

The intensive cultivation of the Peshawar Vale, the existence nearby of tribal areas (in the Northwest Frontier area there are "administered zones" and "unadministered tribal territory," and these terms mean exactly what they say), the fascinating mountain states of Swat and Chitral to the north -- all these things make the Peshawar region a wonderful place to study both physical and cultural geography. At the moment, nomads (the Pathans) are moving down from the mountain areas, and the road from the Pass is frequently obstructed by long camel caravans; many of these people will make their camps along the road during the winter.

---Robert D. Campbell

NEWS FROM GEOGRAPHIC CENTERS

Southwestern Louisiana Institute

This is the fourth year that geography has been in the Department of Social Studies. Enrollment in geography has increased sharply because all freshmen in the College of Engineering are required to take the one semester freshman geography course. Approximately three-fourths of the entire student body now take one or more geography courses. Although geography is primarily a service department, a geography major is available.

The geography staff this year consists of Robert M. Crisler, Head of the Department, Minnie P. Kelley, Allen D. Hellman, and Vernon Behrhorst. Robert M. Webb is on leave of absence at the University of Kansas.

The faculty and staff of the Institute publish a quarterly called The Southwestern Louisiana Journal. An article by Dr. Crisler on Trade Area Boundaries in Louisiana, Arkansas, and Missouri, appeared in the April 1957 issue.

Of possible interest to historical geographers is the Ph.D. dissertation of Vincent Cassidy, Assistant Professor of History. His topic was "The Western Ocean: The Atlantic in the Cosmography of the People of Western Europe Prior to A.D. 1250." Ben Kaplan, Professor of Sociology, has published a study of the Jew in the small-town South (The Eternal Stranger, Bookman Associates, N.Y., 1957, 198 pps. $4.00). Concentrating on the Jewish population of three Louisiana communities, Clinton, Opelousas, and New Iberia, this book will interest many students of the cultural geography of the United States. In the case of Opelousas and New Iberia, which are in the French speaking Catholic "Cajun Country" one might suggest that Dr. Kaplan is reporting on "cultural islands" within a "cultural island."

American University of Beirut

The American University of Beirut has inaugurated a new Department of Geography, currently under the chairmanship of George B. Cressey now on research leave from Syracuse University. His place will be taken next fall by Rowland Illick, now at Middlebury College in Vermont. A. U. B. is the largest overseas American university, with more than 2,000 students, 85 of whom are Americans. Scores of nationalities are represented.

The University has an opening for a half- or two-thirds time Graduate Assistant or Instructor for 1958-59. Although advanced work in geography will not be offered for some years, this should provide excellent opportunity for a graduate student to work on a dissertation. The University is especially strong in its Arab studies program, and southwestern Asia offers many possibilities for field work. The appointment is preferably for two years, but one-year candidates may be considered. Arrangements for salary and transportation will be based on qualications and the time involved, but will be adequate. Correspondence, preferably in duplicate, should be addressed to Professor Cressey in Beirut, Lebanon, and to Professor Illick at Middlebury. Full supporting documentation and the usual reference letters are desired.

University of Maryland

Although we have our own building, or perhaps because of it, we have been suffering more each year from lack of floor space. This is to be remedied within the next two years by a large new building for the College of Business and Public Administration. In this building we are to occupy the center portion and left wing of the main floor. This will give us from 70 to 80 % more effective floor space than we have at present. The staff consists of Professors C. Y. Hu, J. P. Augelli, A. E. Karinen, F. O. Ahnert, D. J. M. Hooson, W. W. Deshler, A. Sas, and N. M. McArthur; Lecturers with the rank of Professor, H. Lemons and F. Webster McBryde; Consulting Professors, V. Roterus and C. E. Whipple; Professor Van Royen, Head, and an increased number of Research, Cartographic and Laboratory Assistants. Dr. Ahnert has come to us from the University of Heidelburg, Dr. Hooson from Oxford, London, & Glasgow Universities, Dr. McArthur from Western Ontario & Michigan Universities, Dr. Sas from Amsterdam & Clark Universities, and Dr. Deshler was appointed to the staff on his return from two years in Africa.

Dr. Hu's fields continue to be South and East Asia and the history and scientific methodology of geography; Dr. Augelli's are Latin America and political geography; Professor Karinen's are cartography, especially the applied phases. Dr. Ahnert's specialities are morphology and related subjects such as map and photo interpretation, Dr. Hooson's, the U.S.S.R. and Europe; Dr. Deshler's Africa and economic geography; Dr. Sas', meteorology and climatology; Dr. McArthur's, urban geography and Anglo-America. Dr. Lemons specializes in theoretical and applied climatology; Dr. McBryde in theoretical cartography and Latin America; Professor Roterus in industrial geography; and Dr. Whipple in agricultural geography.

A few years ago the department instituted a course to be taken by all undergraduate majors in geography, the purpose of which is integration of subject matter studied before in separate geography courses. Each student is required to present a "vest-pocket" dissertation based, as much as possible, on field work. The department has also instituted a separate course of study for those undergraduates particularly interested in cartography, and another which prepares undergraduate majors for geographical work in planning agencies. A number of former students have already entered this field. At present Dr. McArthur is conducting, with eight of his students, a study of land use in the Gaithersburg area, which is to be presented to the town government. Other studies, along similar lines, are in preparation for the area between Washington and Baltimore.

Professor Hu has recently completed a revision of the articles on Japan and Korea for the World Book Encyclopedia. As consultant with the Department of Defense he completed a research project on China. Currently he is bringing up to date basic data for the text of the China Atlas. Last summer he visited Montreal and toured part of the St. Lawrence Seaway Project. Dr. Augelli, besides writing a number of reviews, was co-author of the Focus issue dealing with the Caribbean Federation; he revised the article on Cuba in the Encyclopaedia Britannica, and wrote reports for the U.S. State Department on the constitutional systems of the British West Indies and the West Indies Federation. His article on the British Vrigin Islands was abstracted in the Bolletino della Societa Geografica Italiana. At present he is working on foreign agricultural settlement in a part of Brazil where he did field work.

Dr. Ahnert has finished an article for Erdkunde on Washington, D.C., and is now working on the morphology of estuarine meanders in the Chesapeake Bay area. He recently received a grant from the University of Maryland's General

Research Board for morphological studies in the Zuni uplift area of New Mexico and Monument Valley of Arizona and Utah.

Professor Karinen is continuing his work on an historical-geographical and cartographical study of population of the state of Maryland. Dr. Deshler is working on the economic geography of the Bajun area of Kenya, and population aspects of part of the Karamojong area of Uganda. Dr. Hooson has written on recent growth of population and industry in Hertfordshire in the Transactions of the Institute of British Geographers, 1957, and has been reconnoitering the large amount of Russian literature pertaining to geography in the Library of Congress and other libraries. Dr. Sas has published an article on Dutch immigration into Canada in the Tijdschrift voor Economische en Sociale Geografie, July-August 1957, and is continuing his investigation of Dutch immigration into that country.

Dr. Lemons wrote "Physical Characteristics of Disasters: Historical and Statistical Review" in the Annals of the American Academy of Political and Social Science, Vol. 309, January 1957, pp. 1-14, and some book reviews. Professor Roterus was elected to membership of Lambda Alpha Fraternity (land economics) and was appointed member of the NRC Committee on Urban Research. He delivered a paper on "Federal Government Data Sources on Southern Markets" before the Southern Association of Science and Industry, has written "Industrial Location and Recreation" to be published in the Proceedings of the Fall Meeting of the Interstate Commission on the Potomac River Basin, and presented a paper on "Industrial Development Coast to Coast" in Honolulu which will be published in the Proceedings of the Second Annual Industrial Development Conference of the Honolulu Chamber of Commerce, October 10, 1957. While in Hawaii, Mr. Roterus made a tour of the Neighbor Islands in company with officials of the Economic Planning and Coordination Authority of the Territory of Hawaii. As a result of this trip, he is submitting a report to that Authority on the subject of "Assisting the Neighbor Islands of Hawaii to Develop Their Economies." For the Annals he and Dr. R. A. Prior have finished an article on "Recent Concerns and Contributions in Area Development."

Dr. Van Royen, Dr. Ahnert and three research assistants are continuing work on the third volume of the Atlas of the World's Resources, which is to deal with forest and fish resources. A considerable number of maps pertaining to forests, lumber production and trade and fish resources have been made, while for other maps the process of gathering and re-working basic data is nearing completion. Dr. Van Royen spent the summer in Great Britain, the Netherlands, and Belgium visiting a number of colleagues and departments of geography. He later made an extended automobile trip through France with particular emphasis on landforms and land use in the eastern Pyrenees, Cevennes, and Central Plateau including visits to many of the renowned archaeological sites and collections of southern France.

Professor McBryde, as Director of the Census Atlas Project, U.S. Bureau of the Census, published in 1956 Census Atlas Maps of Latin America: Greater Antilles, joint publication of Census Bureau and International Cooperation Administration. The preliminary research was done under his direction as student projects in Latin America Seminar, University of Maryland. This was a sequel to a similar project, Census Atlas Maps of Latin America: Central America, published in 1955. As Director of Regional Planning of Gordon A. Friesen Associates, Inc., he is in charge of a health and hospital survey of Costa Rica. This has involved five trips to Costa Rica, a series of eleven lectures during April and May 1957 on hospital survey methods; an address to the Second Hospital Congress, and organizing the Costa Rican Hospital Association, of which he was named honorary member. He edited a new map of communications, hospitals, and health

centers of Costa Rica, now in press. For seminar research, Latin America and cartography classes at Maryland, he developed new cartographic methods on the basis of original Costa Rican data.

He attended the Conference of the Caribbean, Gainesville, Florida, December 1956; was named Program Chairman of the Association of American Geographers, Middle Atlantic Division for 1957; Chairman of Council on Inter-American Studies, Middle Atlantic Group, since January 1957 (secretary for three years prior to this). As Washington Representative of Executive Research, Inc. of Los Angeles, he served as special adviser to Honduran Ambassador Dr. Ramon Villeda Morales, now President-elect of Honduras. He gave Foreign Service Institute orientation lectures on Latin America in 1956 and 1957, and is continuing work on new world map projections and a book on Middle America.

The Catholic University of America

John J. Hooker who took a degree in geography at Birkbeck College and in economics at the London School of Economics at the University of London has been added to the faculty of the Department of Economics, but he will teach one course in the Department of Geography each fall semester. Dr. Hooker wrote a doctoral dissertation on "The Economic History and Geography of the Flemish Lowland in the 18th Century." One of his supervisors was W. Gordon East. With the addition of Dr. Hooker the geography staff now consists of two full-time and three part-time men. Herman R. Friis continues to teach a course in the historical geography of the United States, and the Rev. Artheme A. Dutilly conducts a course in polar regions where he has spent 25 field seasons as a plant ecologist.

Chiao-min Hsieh received grants from the National Academy of Sciences--National Research Council, the Asia Foundation, and the Catholic University of America to participate in and to deliver a paper to the International Geographical Union Regional Conference in Japan. Before the conference he toured Japan for a week, visiting Nagoya, Kyoto, Osaka, and Kobe. After the conference he was invited by the Ministry of Education of the Republic of China in Taiwan to deliver a lecture. (The Minister of Education, Professor Chi-yun Chang, is a noted geographer in China.) During his stay in Taiwan, he toured the island by airplane, rail, and automobile, and had an excellent opportunity to make a final check of the landscape of the island for his prospective book on "Taiwan--Yesterday and Today." Having flown to Tokyo via the Pacific, Hsieh returned by way of India, the Near East and Europe on a world girdling journey lasting seven weeks. Stops were made in Hong Kong, Rangoon, Karachi, Cairo, Rome, Zurich, Hamburg, and Paris. He was especially interested in having the chance to visit the geography centers at European Universities, such as Geographischen Institut der Universitat Zurich, Geographie Institute der Universitat Hamburg and Institute Geographie de Universitie de Paris.

Kenneth J. Bertrand has accepted an invitation to serve as a member of the educational advisory committee of the Marine Historical Society of Mystic, Connecticut. The society's library and museum at Mystic Seaport, the reconstructed 19th century port, are available to scholars, and a graduate seminar is held each summer in connection with the University of Connecticut on some phase of maritime history. Lecturers are brought in from many places for the purpose.

The July issue of the Bulletin of the Geological Society of America contained an article and map entitled "Pleistocene Geology of the Door Peninsula, Wisconsin," the result of joint field work and research by Professor F. T. Thwaites of the University of Wisconsin and Dr. Bertrand.

PERSONAL NEWS

Burton W. Adkinson has resigned as Director of the Reference Department of the Library of Congress to become Director of the Office of Scientific Information at the National Science Foundation.

Mary Alice Ericson of Gustavus Adolphus College, St. Peter, Minnesota, was elected to the Executive Council of the Minnesota Academy of Science. This action followed her revival of the Social Science Section in 1957. As representative from the social sciences, she has coordinated appeals from geographic and other social science organizations to the Science Fair Committee of the Minnesota Junior Academy of Science to expand their categories of exhibits in the Regional Science Fairs. Since affirmative action has been taken by the Committee, geography and other social science students in Minnesota will be eligible to participate in the 1958 Fairs on a par with natural science students for the first time.

William C. Culp has joined the staff of the Social Science Department at Northwestern State College, Natchitoches, Louisiana.

Richard F. Logan of UCLA has returned from a sabbatical year in South West Africa where he conducted studies of the Namib Desert. His field work was made possible through a grant from the Foreign Field Research Program of the National Research Council.

Joseph E. Spencer of UCLA is on sabbatical leave this year and is teaching at the University of Malaya under a Fulbright award.

J. Granville Jensen of Oregon State College is spending this academic year in Latin America. He is the new President of the Association of Pacific Coast Geographers.

Elbert E. Miller has joined the staff of Western Washington College of Education. He was formerly on the faculty of the University of Utah.

Robert D. Rudd is a new member of the Geography staff at Oregon State College where he will teach courses on physical geography and cartography.

Willis B. Merriam, State College of Washington, spent part of the summer directing the Conservation Workshop at the University of Delaware and then made an extensive tour of the Atlantic seaboard and the Gulf coast on his return.

Morton W. Harmel has resigned from his position as research analyst in the Office of the Chief of Naval Operations to become Resources and Requirements Officer in the Federal Civil Defense Administration, Capital Area Branch Office, 8605 Cameron Street, Silver Spring, Maryland.

Dean S. Rugg has accepted an assignment as Geographic Attache in the American Embassy at Bonn, Germany. His new address is American Embassy, Box 205, APO 80, c/o Postmaster, New York, N. Y.

Howard L. Green has been named as store research and development manager of Montgomery Ward & Co. Since 1955 he has been assistant to the retailing Vice President of Stop & Shop, Inc.

David H. Miller of the Quartermaster Research and Development Center attended the first scientific congress of the new International Society of Bioclimatology and Biometeorology held in Vienna. He also visited various geographic centers in Germany, Sweden, and England.

Loyal Durand, Jr. is Visiting Professor of Geography at the University of Hawaii for the current academic year.

NEW PUBLICATIONS

California Range Land, An Historico-Ecological Study of the Range Resources of California. L. T. Burcham. California State Department of Natural Resources, Division of Forestry, Sacramento. 1957. 261 pp. illust. $3.12 (postage included).

The most important chapters of this study are concerned with the history and impact of the introduction of aggressive Mediterranean annual grasses into California and the progressive deterioration of the carrying capacity of the unfenced range as a result of overstocking and misuse. The author is currently in charge of range improvement work in the California State Division of Forestry and the improvement and extension of upland range at the expense of chaparral through controlled burning and reseeding. Under the title "An Historical Geography of the Range Livestock Industry of California" this study was originally submitted as a doctoral dissertation at the University of California, Berkeley.

---James J. Parsons

Land of the Moon-Children. Clyde E. Keeler. University of Georgia Press, Athens. 1956. x and 207 pp. illust. $4.50.

Both physically and culturally Panama's palm-covered and coral fringed San Blas islands have a strikingly Polynesian aspect. This semi-popular book, an anecdotal description of life among the San Blas Cuna, the so-called White Indians of Darien, has been written by a medical geneticist who has spent four summers among the islanders studying the phenomena of albanism. The author's informal census of albinos ("moon-children") leads him to estimate that they number in excess of 300 in a total native population of about 17,000. Another group, the blue-eyed blonds, bespeak past Anglo-Saxon mixing on the beaches.

The disintegration of San Blas culture has been long delayed, but today old tribal customs rapidly are dying out. In this process the easy air communication between the islands and Panama City has been an important factor. The author was a guest of the Baptist mission during his residences in the islands. He provides some significant primary documentation on another important impetus to change, the intense and sometimes disruptive rivalry between Protestants and Roman Catholics for the souls of these culturally conservative and artistically talented folk. This contest reflects another, that for lingulstic dominance, between the English, Spanish, and Cuna tongues. In this the Panamanian government is also involved.

---James J. Parsons

Cherokees of the Old South. Henry T. Malone. University of Georgia Press, Athens. 1956. xiii and 238 pp. illust. $4.50.

This sympathetic, detailed and carefully documented account of the Cherokees at the time of their expulsion from their homeland in the southern Appalachians is considerably more than a retelling of the events of this sad period in United States history. Dr. Malone very successfully achieves his objective of presenting a clear picture of the social development of the Cherokees during the 18th and early

19th centuries, and thus provides historical geographers with valuable material. He discusses the ways in which the work of traders, missionaries, government agents and progressive Indians, mainly half-breeds, aided and accelerated the phenomenal cultural growth of the Cherokees. By the 1830's they had come a long way from their status in the 17th century. They had established a national government with a written constitution, were eagerly educating their children, had a national newspaper and were settled, and in many cases prosperous farmers and businessmen. The processes and results of mixing Indian and white culture are fully described. The book closes with a stirring account of the Cherokee's desperate and fruitless struggle to remain in their homeland.

The Atlas of Australian Resources. Department of National Development, Canberra, A.C.T., Australia. Published by Angus & Robertson, Ltd., Sydney, Australia. 10/6 ($1.25) per map and commentary.

Since the end of World War II, there has been an increasing awareness on the part of scientific and government groups of the inadequacy of detailed information relating to Australia. The Atlas of Australian Resources is an out-growth of the efforts of these groups within Australia to correlate materials relating to the nation's resources and developments and to map their summary findings.

The project has had the support of the Federal Government since 1949 but actual work was not undertaken until 1952; the first map appeared in 1953. Basic research materials were gathered together by authorities in the various government agencies, the universities, and research organizations. The actual planning and production of the atlas was in the hands of Dr. Konrad Frenzel, a German geographer and cartographer, who served as the editor of the atlas in its initial stages of production.

On the whole, the present series of maps is outstanding. The maps are of a standard size, 28 1/2" x 29 1/2", and at a uniform scale of 1:6,000,000. Exceptions are the temperature and rainfall sheets whereon small scale maps have been utilized to show detailed monthly characteristics. The maps are printed by the offset printing process utilizing up to 13 colors on a map with varying degrees of success. (The Physical Features map employs plastic shading and three colors to detail relief. While the idea may have been good, the blending of the two techniques has produced an unattractive map due largely to the inferior techniques presently available in Australia for the reproduction of colored work.) Legends are detailed and meaningful both to the professional and to the layman although occasional maps carry too many symbols and symbols too complicated for easy use.

An example of this occurs on the map of Major Developmental Projects. A pleasing and highly informative map, it attempts to show too much in too many different ways. A great range of developmental projects are classified and located on the map by colored symbols. This in itself is good but the attempt to show the magnitude of each project by symbols of varying sizes proves to be inadequate and of limited value. Such information should be in the related statistical tables.

With each map a commentary booklet explains the details of the principal map and provides background data by means of text, pictures, diagrams, and tables. The commentaries are well-written and authoritative -- they are the work of individual authorities or, for more comprehensive subjects, of a group of experts in a field. In more than one case, the commentaries provide the most thorough, up-to-date treatment of a topic currently available.

Twenty of the proposed 50 maps are already published with accompanying commentary. Included are maps of underground water, climatic regions, soils, mineral deposits, major developmental projects, power and fuel, and distribution

of stock. Ten additional maps will be produced before the end of 1958 including those on geology, health, migration, and manufacturing. Details concerning the final 20 maps are not complete but it is likely that the more specific studies of climate and the potential development of Australian resources will be forthcoming.

The current series of maps may be purchased separately or as a series. Maps may be obtained folded and in a box large enough to hold 10 maps and commentaries or they may be obtained to fit into a loose-leaf folder.

These maps are an excellent representation of the Australian Government's growing interest in the physical whole of the continent and with the entirety of its economy. Their practical use cannot be underestimated both for the wealth of material they contain and for the variety of cartographic methods and symbols they employ.

---Henry L. Hunker

Temperatures of Northern North America. Donald W. Hogue. U.S. Army Quartermaster Research & Engineering Center. Natick, Mass. June 1956 (Revised Oct. 1957). Environmental Protection Research Division, Research Study Report RER-9. ii and 62 pp. mimeographed. Free but supply limited.

Temperature data are presented for 169 stations distributed at intervals of about 5 degrees latitude and longitude in Alaska, Canada, Greenland, and Iceland. Information on mean temperature, mean daily maximum, mean daily minimum, absolute maximum, absolute minimum and temperature frequencies is organized in tables. Mean monthly temperatures are summarized on 12 maps. A bibliography is included.

Soil Survey of Pasquotank County, North Carolina. Dept. of Agriculture, Soil Conservation Service and the N. C. Agricultural Experiment Station. U.S. Government Printing Office, Washington 25, D.C. October 1957. $3.00.

This is the first of the new type of soil survey series reports which the Department of Agriculture and State agencies, working together on the National Cooperative Soil Survey, have adopted as standard for all such reports. The detailed soil survey maps, on a scale of 1:20,000 and measuring 11 1/2 by 15 inches, have an aerial photomosaic background with soil boundaries and symbols overprinted in red. In the new atlas format, the maps are folded and bound with descriptive text in a booklet measuring 9 1/4 by 11 1/2 inches, eliminating the separate large sheets used for the old line base maps. The format of the new series is much more practical for field use and study than were the large and unwieldy map sheets which accompanied previous county soil surveys.

---Catherine I. Bahn

River Basin Development. Law and Contemporary Problems. School of Law, Duke University. Vol. XXII, No. 2 (Spring 1957). $2.00.

Things of interest to a geographer turn up in so many places that he is likely to miss some. Because this might be the fate of this publication, it is worthwhile to focus attention on it. In this volume the important problem of river basin development is dealt with from a variety of angles. Following a forward by Melvin G. Shimm in which reasons for the symposium are set forth, Gilbert W. White outlines the background and framework of the problem both from the point of view of the physical attributes of rivers and their basins, and the concepts of unified

river development. He also discusses some of the problems of applying the concepts. The engineering aspects of river basin development are presented by Arno T. Lenz. He notes the kinds of physical data collected in the study of basins, and their application to planning and operating structures for water control. Water use and supply problems, and their regional differences are presented, together with their effect on engineering planning. William E. Folz begins his discussion by admitting the difficulties of assessing the economic consequences of river basin development, in part because of the lack of acceptable economic theories directly applicable, but proceeds to examine the influences of such development on economic expansion. He concludes that the use of water for irrigation and cheap power are probably the best economic stimulants. The type and degree of such induced expansion is surmised, richly qualified by the lack of information on which to base reliable predictions. Tentative conclusions are drawn of the effects of such growth on the national economy. Carl F. Kraenzel describes the position and influence of social pressures in the development of concepts of river basin development and analyzes the nature and magnitude of the social consequences of the TVA and Missouri River Valley projects. The reasons for the great differences in these consequences are critically discussed. The problems of deciding which projects are to be supported and the criteria used in judging relative merits of proposed developments are presented by Hubert Marshall followed by Norman Wengert's objective analysis of the complex factors involved in public-governmental decisions, and the real and imagined role of politics. Wells Hutchins and Harry A. Steele review and evaluate existing law, riparian and appropriation doctrines. Special attention is given to the application of these doctrines to the West. A model state water code is discussed by Frank J. Trelease. Accepting prior appropriation as the best existing system of law for river basin development, he describes the various factors that should be covered by the code, and examines their facets and legal implications.

North and Northeast Africa, A Selected, Annotated List of Writings, 1951-1957. Compiled by Helen F. Conover. Library of Congress, Card Division. Washington, D. C. 1957. v and 182 pp. $1.35.

In June 1957 the first volume of this 2-volume guide to recent literature on Africa was issued. It dealt with the area south of the Sahara. These two volumes supplement Introduction to Africa, a bibliography published by the Library of Congress in 1952. This newest volume contains 349 numbered and annotated entries and extended notes that refer to some 200 additional works. The arrangement is by country with breakdowns by subject under those countries for which there is a relatively large amount of material.

The Geography of the Port of London. James Bird. Rinehart & Co., Inc. New York. 1957. 207 pp. illust. $1.50.

This current addition to the Hutchinson University Library series undertakes a rather comprehensive discussion of the physical and commercial structure of the port of London, its internal traffic circulation, and its associated industrial development. This contribution to port literature is the first lengthy treatment of the geography of the London port area since L. R. Jones' The Geography of London River appeared in 1931, and the present volume illuminates important changes which have occurred during the past quarter of a century. Principal subjects are site and situation (mainly a recapitulation of a large volume of published material in the geographical literature), the development of the port between 1179 and 1799, the physical geography of the lower Thames River and Estuary, the older

and newer wet docks, barge and lighter traffic in relation to riverside wharves, the industrial development along the lower Thames, and the markets and trade of the port. The discussion of the wet docks, their history during and since the war, and their current operations, is particularly detailed. Emphasis rests almost entirely on the port itself, but the port area is delimited liberally, if somewhat indefinitely, to include the canals to the north of the lower Thames, together with a considerable part of the Estuary. Imports, exports, and transit trade are treated, the last somewhat summarily, in the form of commentaries on statistical summaries. Neither London's maritime links with other parts of the world, nor the structure of the port's hinterlands, are developed. Maps and diagrams are consistent with the usual Hutchinson University Library format.

---Donald J. Patton

The Faunal Connections Between Europe and North America. Carl R. Lindroth. John Wiley & Sons, Inc. New York. 1957. 344 pp. illust. $15.00.

Geographers will welcome this latest contribution both to the field of biogeography and to the knowledge of northern fauna. The author, a specialist on Carabidae with a record for diligent and thoughtful research, bases much of the book on data from his field work in eastern North America, Iceland, England, and Europe.

Before he gets down to the problems of routes and modes of transport, Dr. Lindroth presents a detailed list of the animals that are common to Europe and North America, that breed on both continents, and that were transported unintentionally by man in either direction. As might be guessed, the heaviest traffic in these stowaways proves to be in the direction of North America. This, plus the fact that so many European animals and plants were introduced into Newfoundland during the early colonial days, lends important support for his theory that one of the main modes of transport was in the ballast commonly carried on sailing vessels plying west in the North Atlantic trade. Using Newfoundland as an example, the author shows that the individuals and the composition of the faunal elements are directly traceable to ports in southwest England where ballast was taken on. Further, he goes on to show that the terrestrial animals that arrived in North America all had qualities which enabled them to make the journey in the ballast. One interesting aspect of these animal and plant immigrants is their characteristic high degree of dependence on human culture. The distribution and rate of spreading of some of these introduced species are plotted on maps.

Under the chapter title "The True, Pre-Human Relationship Between the Palaearctic and Nearctic Faunas," the author discusses the various Amphiatlantic and Westarctic species, and groups them according to the characteristics which might enable them to disperse without the aid of man, e.g., ability to fly, or to drift in sea currents. In a critical, objective fashion, the various theories of land-bridges, relict populations and continental drift are evaluated in terms of the faunal evidence. Particular attention is paid to the circumpolar distribution and dispersal of northern fauna, and to a lesser extent, flora.

The many maps, the valuable factual data, the thought-promoting discussions and the readable style should place this book high on the reading list of all geographers.

forms and other phenomena lacks an overall general theme such as water serves for the discussion of the dry West.

Maps are used profusely. The maps of representative farms, each farm having been visited by the author, are most rewarding and provide uniqueness. These maps indicate management practices, such as irrigation, drainage, terracing, crop land, slope, land capability classes, shelterbelts, and transportation patterns -- the items mapped showing significance for the region in which a particular farm is situated. There is a variety of United States, state and regional maps, each of which serves a useful purpose, but it is probable that the maps of the larger areas would have been enhanced by increased size. The appendix contains a number of the Bureau of the Census crop maps.

There is abundant use of meaningful statistical data in tabular form and within the text. These data are used to make apt comparisons and to show important trends; yet, the statistical material is wisely used and does not overload the book with unnecessary detail.

American Agriculture: Geography, Resources, Conservation, as stated by the author, was designed to serve students in geography, the agricultural sciences, vocational agriculture, and conservation. It should serve all of these students well, and it will prove to be an addition to the library of the professional geographer interested in agricultural geography of the United States.

---Chester F. Cole

California Lands, Ownership, Use, and Management. Samuel Trask Dana and Myron Krueger. American Forestry Association, Washington, D.C. 1958. vi and 308 pp. illust. $4.50.

California Lands concerns the ownership, use, and management of the natural resources of 100,000,000 acres of land and water by 14,000,000 Californians. The area is vast and widely varied in character. Roughly one third is valuable for forest and watershed purposes, about one fifth is barren and desert land, and approximately one sixth is susceptible to cultivation. Scenic and recreational resources--beaches, forests, lakes, mountains, and wildlife--are outstanding and numerous.

Among the states in the nation, California is first in cash income, second in the production of lumber, and third in value of mineral production. Thus, the need for continued wise management of natural resources is of growing importance. Since World War II there has been a new attitude developed toward management by private owners of forest and range resources. The increasing demand for these resources, increased values, and improved technologies of production and utilization have made management profitable.

Not only are the authors of California Lands concerned with the inescapable problem of insuring that the natural resources meet present day needs but perhaps of greater concern is the problem of meeting those which will be generated by the skyrocketing population increase that is expected within the next half century. Multiple use of the resources, commonly thought of as a cornucopia which will yield unlimited supplies

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